**UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF COLUMBIA**

| | |
|---|---|
| **IN RE PAPST LICENSING GMBH & CO. KG LITIGATION**<br>_____<br>**This Document Relates To:**<br>**ALL CASES** | **Misc. Action No. 07-493 (RMC)**<br>**MDL Docket No. 1880** |

## CAMERA MANUFACTURERS' INVALIDITY CONTENTIONS

Pursuant to this Court's Second Practice and Procedure Order, defendants Casio America, Inc., Casio Computer Co., Ltd., Fujifilm Corp., Fujifilm USA, Inc., Hewlett-Packard Company, JVC Company of America, Matsushita Electric Industrial Co., Ltd., Olympus Corp., Olympus Imaging America, Inc., Panasonic Corporation of North America, Samsung Opto-Electronics America, Inc., Samsung Techwin Co., Ltd. and Victor Co. of Japan, Ltd. (collectively, the "Camera Manufacturers") submit the following Invalidity Contentions ("Invalidity Contentions") in response to the Asserted Claims and Infringement Contentions ("Infringement Contentions") submitted by plaintiff Papst Licensing GmbH & Co. KG ("Papst") on May 28, 2008.[1]

## PRELIMINARY STATEMENTS

The Camera Manufacturers base these Invalidity Contentions on their current knowledge, understanding, and belief as to the facts and information available as of the date of these contentions. The Camera Manufacturers have not yet completed their investigation, collection of information, discovery, or analysis relating to the patents-in-suit, and the Camera Manufacturers may supplement or modify these contentions based on further investigation and/or discovery.

[1] As clarified by the Court in its status conference on June 5, 2008, for purposes of this Multidistrict Litigation Papst shall be considered the plaintiff and the Camera Manufacturers shall be considered the defendants.

Further, Papst's Infringement Contentions, including Papst's proposed constructions of claim language, are deficient in many respects and do not provide the Camera Manufacturers with sufficient information to understand the bases for Papst's infringement allegations or to identify all of the prior art that might be invalidating. To the extent Papst's Infringement Contentions are understandable, these Invalidity Contentions are based, at least in part, on Papst's constructions regarding claims 1, 2, 3, 5, 7, 11, 14 and 15 of U.S. Patent No. 6,470,399 ("the '399 patent"), claims 1, 2, 6, 7, 8, 9, 12, 13, 15, 16, 17 and 18 of U.S. Patent No. 6,895,449 ("the '449 patent"), and Papst's application of those constructions to the accused products. Papst did not provide any contentions suggesting that the Camera Manufacturers infringe other claims of these patents or any other patent. Consequently, in reliance thereon, the Camera Manufacturers have not separately addressed the other claims in the '399 and '449 patents (the "patents-in-suit" or "asserted patents").[2]

In addition, the Camera Manufacturers have not received all of the documents that may be relevant to their Invalidity Contentions, and Papst has not produced all of the information responsive to the Camera Manufacturers' discovery requests. The Camera Manufacturers also have not had the opportunity to take the deposition of the named inventor of the '399 and '449 patents and/or other persons having potentially relevant information. The Camera Manufacturers are in the process of issuing subpoenas to third parties believed to have knowledge, documentation, and/or corroborating evidence relating to invalidity and/or prior art. It is therefore likely that the Camera Manufacturers will discover additional prior art pertinent to the asserted claims of the asserted patents and the Camera Manufacturers reserve the right to supplement these contentions within a reasonable time after becoming aware of additional prior art. The Camera Manufacturers reserve the right to introduce and use such supplemental materials at trial.

Further, the Camera Manufacturers have had little or no discovery concerning the alleged

[2] The Camera Manufacturers reserve the right to amend and/or supplement these Invalidity Contentions, if necessary, due to any amendments Papst may make to its Asserted Claims and Infringement Contentions.

conception and reduction to practice by the named inventor of the subject matter of the asserted patents. Accordingly, the Camera Manufacturers do not presently have a basis for assessing the date(s) to which Papst might be entitled as an earliest conception date or the named inventor's diligence, if any, through reduction to practice. The Camera Manufacturers may seek documents from third parties in discovery that establish earlier dates of conception and reduction to practice, as appropriate, in order to demonstrate such third parties' earlier dates of invention under 35 U.S.C. § 102(g). The Camera Manufacturers therefore reserve the right to supplement these Invalidity Contentions with further documentation, if and when it becomes available, to support earlier dates of invention for prior art than what is argued by Papst to be the dates of invention for the patents-in-suit.

Moreover, the Camera Manufacturers have had little or no discovery concerning the claimed priority date for each of the asserted claims. The Camera Manufacturers presently are examining the date(s) to which Papst might be entitled as an earliest priority date for each of the asserted claims. By way of example only, the original German patent application (filed March 4, 1997), to which the '399 and '449 patents claim priority, was changed in significant respects to become the PCT application (filed March 3, 1998) which lead to the '399 and '449 patents. Accordingly, certain claims of the '339 and '449 patents may have different priority dates because their supporting disclosures are impacted by these changes to the specification. For any such claims, references and products from different time periods may constitute invalidating prior art. The Camera Manufacturers further reserve their right to supplement, modify, and/or amend their Invalidity Contentions and their identification and production of prior art in view of the Court's determination of the correct priority date for any of the asserted claims in this action.

The Camera Manufacturers also reserve their right to supplement, modify, and/or amend these Invalidity Contentions after the Court has construed all relevant claim terms. The Camera Manufacturers' contentions concerning the validity of the claims of the asserted patents may change based upon the Court's construction of the claims or positions that Papst may take concerning claim construction, infringement, or validity issues.

The Camera Manufacturers provide the information herein according to the Camera Manufacturers' understanding of Papst's interpretations of the patents-in-suit, as set forth in Papst's Asserted Claims and Infringement Contentions. The information below and in the accompanying Exhibits is not in any way an admission regarding the scope of any claim asserted by Papst nor is it an admission as to the proper construction or interpretation of the asserted claims or any terms contained therein. The Camera Manufacturers reserve the right to supplement, modify and/or amend their Invalidity Contentions in view of any modifications or clarifications Papst may make to its proposed claim constructions or infringement contentions. Further, the production of documents that have been identified in these Invalidity Contentions shall not be deemed an admission that such documents are admissible or that the Camera Manufacturers have waived any objections regarding the admissibility of such documents.

In the claim charts accompanying these Invalidity Contentions, the Camera Manufacturers identify specific portions of prior art references that disclose the elements of the asserted claims. Although the Camera Manufacturers have attempted to identify at least one citation per element for each reference, each and every disclosure of the same element in the reference is not necessarily identified. The lack of a citation for an element should not be deemed an admission that the element is not disclosed or is not inherent in the reference, as the Camera Manufacturers' investigation is ongoing. In an effort to focus the issues, the Camera Manufacturers identify only exemplary portions of cited references. It should be recognized that persons of ordinary skill in the art generally read a prior art reference as a whole and in the context of other publications and literature. To understand and interpret any specific statement or disclosure within a prior art reference, such persons would rely on other information within the reference, along with other publications and their general scientific or engineering knowledge. The Camera Manufacturers consequently reserve the right to rely upon other unidentified portions of the prior art references and on other publications and expert testimony to provide context, and as aids to understanding and interpreting the portions that are identified. The Camera Manufacturers also reserve the right to rely on other portions of the prior art

references, other publications, and the testimony of experts to establish that a person of ordinary skill in the art would have been motivated to modify or combine certain of the cited references so as to render the claims obvious.

Certain limitations in the asserted claims may be disclosed in the prior art by the disclosure of certain characteristics. By way of example only, a disclosure in a prior art reference of an analog-to-digital converter indicates the presence of a sampling circuit that operates in conjunction with the analog-to-digital converter. As another example, a disclosure of interface communication using only standard protocols (e.g., the SCSI protocol) may also constitute a disclosure of using only the standard communication drivers for that protocol. Nothing contained in these Invalidity Contentions or any accompanying exhibits or claim charts should be understood or deemed to be an express or implied admission or contention with respect to any correlation between the limitations of the asserted claims and other characteristics of the subject matter in the prior art references.

Where the Camera Manufacturers identify a particular figure in a prior art reference, the identification should be understood to encompass the caption and description of the figure and any text relating to the figure in addition to the figure itself. Similarly, where an identified portion of text refers to a figure, the identification should be understood to include the figure.

## IDENTIFICATION OF PRIOR ART

Below are tables identifying the individual items of prior art that, upon reasonable investigation, the Camera Manufacturers believe anticipate and/or render obvious each of the asserted claims of the ’399 and ’449 patents. Invalidity charts for each of these items of prior art are attached to these Invalidity Contentions with an Exhibit number as indicated in the column titled “Invalidity Chart.”

**Table I: United States Patent Prior Art**

| US Patent No. | Title | Inventor | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|---|---|
| 4,901,275 | Analog Data Acquisition Apparatus and Method Provided With Electro-Optical Isolation | Hardie et al. | 9/4/1987 | 2/13/1990 | 102(b) | A1 |
| 5,297,124 | Tape Drive Emulation System for a Disk Drive | Plotkin et al. | 4/24/1992 | 3/22/1994 | 102(b) | A2 |
| 5,430,855 | Disk Drive Array Memory System Using Nonunifrom Disk Drives | Walsh | 2/6/1991; 8/31/1994 | 7/4/1995 | 102(b) | A3 |
| 5,440,699 | System by which a remote computer receives screen images from and transmits commands to a host computer | Farrand et al. | 7/24/1991 | 8/8/1995 | 102(b) | A4 |
| 5,463,772 | Transparent peripheral file systems with on-board compression, decompression, and space management | Thompson et al. | 4/23/1993 | 10/31/1995 | 102(b) | A5 |
| 5,479,206 | Imaging System, Electronic Camera, Computer System for Controlling Said Electronic Camera, And Methods of Controlling Same | Ueno, et al. | 2/2/1993 | 12/26/1995 | 102(b) | A6 |

| US Patent No. | Title | Inventor | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|---|---|
| 5,493,335 | Single Sensor Color Camera With User Selectable Image Record Size | Parulski, et al. | 6/30/1993 | 2/20/1996 | 102(b) | A7 |
| 5,499,378 | Small Computer System Emulator for Non-local SCSI Devices | McNeill | 6/21/1994 | 3/12/1996 | 102(b) | A8 |
| 5,506,692 | Image Handling Apparatus Having File System Emulation Means | Murata | 6/14/1994 | 4/9/1996 | 102(b) | A9 |
| 5,508,821 | Image Scanner and Image Forming Apparatus With An Interface for Connection With an External Computer | Murata | 3/23/1993 | 4/16/1996 | 102(b) | A10 |
| 5,724,155 (JP 7-202982) | Electronic imaging system | Saito | 12/30/1994 | 3/3/1998 | 102(e) | A11 |
| 5,532,825 | Add-on scanner for existing ink jet printer | Lim et al. | 8/30/1993 | 7/2/1996 | 102(b) | A12 |
| 5,539,535 | Portable Electronic Still Camera Reording Optical Images of Subjects in a Memory Which Facilitates Memory Access From an External Request | Aizawa, et al. | 3/22/1994 | 7/23/1996 | 102(b) | A13 |

| US Patent No. | Title | Inventor | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|---|---|
| 5,548,782 | Apparatus for Preventing Transferring of Data With Peripheral Device for Period of Time In Response to Connection or Disconnecting of the Device with the Apparatus | Michael et al. | 5/7/1993 | 8/20/1996 | 102(b) | A14 |
| 5,692,159 | Configurable digital signal interface using field programmable gate array to reformat data | Shand | 5/19/1995 | 11/25/1997 | 102(e) | A15 |
| 5,754,227 | Digital Electronic Camera Having an External Input/Output Interface Through Which The Camera is Monitored and Controlled | Fukuoka | 9/28/1995 | 3/19/1998 | 102(e) | A16 |
| 5,802,325 | Mass Memory Card with Input/Output Function | Le Roux | 3/20/1995 | PCT Pub. 01/20/1994; Issue 9/1/1998 | 102(b) | A17 |
| 5,806,072 | Electronic Imaging Apparatus Having Hierarchical Image Data Storage Structure for Computer Compatible Image Data Management | Kuba et al. | 12/21/1992 | 9/8/1998 | 102(e) | A18 |

| US Patent No. | Title | Inventor | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|---|---|
| 5,812,879 | External Multiple Peripheral Interface to Computer Serial Port Using Individually Configured Parallel Port Terminals | Moro | 4/19/1993 | 9/22/1998 | 102(e) | A19 |
| 5,815,201 | Method and System for Reading and Assembling Audio and Image Information for Transfer out of a Digital Camera | Hashimoto, et al. | 2/21/1996 | 9/29/1998 | 102(e) | A20 |
| 5,815,205 | External Communication Interace for a Digital Camera | Hashimoto, et al. | 2/21/1996 | 9/29/1998 | 102(e) | A21 |
| 5,841,471 | Timing Control for a Digitally Interfaced Camera Using Variable Line Readout Intervals | Endsley et al. | 9/12/1996 | 11/24/1998 | 102(e) | A22 |
| 5,844,961 | Filmless Digital X-Ray System | McEvoy, et al. | 7/26/1996 7/26/1995 | 12/1/1998 | 102(e) | A23 |
| 5,848,420 | System and Method for Accessing Date of a Digital Camera from a Personal Computer | Xu | 6/14/1996 | 12/8/1998 | 102(e) | A24 |
| 5,914,748 | Method and Apparatus for Generating a Composite Image Using the Difference of Two Images | Parulski et al. | 8/30/1996 | 6/22/1999 | 102(e) | A25 |

| US Patent No. | Title | Inventor | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|---|---|
| 5,915,106 | Method and System for Operating a Scanner Which Emulates a Disk Drive | Ard | 3/20/1997 | 6/22/1999 | 102(e) | A26 |
| 5,920,709 | Bus Interface for IDE Device | Hartung, et al. | 11/18/1996 6/4/1996 | 7/6/1999 | 102(e) | A27 |
| 5,926,208 | Video Compression and Decompession Arrangement Having Reconfigurable Camera and Low-Bandwidth Transmission Capability | Noonen et al. | 9/6/1996 | 7/20/1999 | 102(e) | A28 |
| 5,928,347 | Universal Memory Card Interface Apparatus | Jones, et al. | 11/18/1997 | 7/27/1999 | 102(e) | A29 |
| 5,969,750 | Moving picture camera with universal serial bus interface | Hsieh | 9/4/1996 | 10/19/1999 | 102(e) | A30 |
| 5,974,161 | Detachable card for capturing graphics | York | 3/1/1996 | 10/26/1999 | 102(e) | A31 |
| 5,991,530 | Interface device receivable in card storage device slot of host computer | Okada et al. | 10/22/1997 (Continuation of application filed 1/31/94) | 11/23/1999 | 102(e) | A32 |
| 6,005,613 | Multi-mode Digital Camera with Computer Interface Using Data Packets Combining Image and Mode Data | Endsley, et al. | 9/12/1996 | 12/21/1999 | 102(e) | A33 |

| US Patent No. | Title | Inventor | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|---|---|
| 6,081,856 | Adapter and method for emulating the operation of a peripheral device of a computer | Comer | 12/2/1997 | 6/27/2000 | 102(e) | A34 |
| 6,088,532 | Image Signal Reading Operation Control Device | Yamamoto et al. | 12/29/1995 | 7/23/1996[3] | 102(b) (JP date) | A35 |
| 6,098,116 | Process control system including a method and apparatus for automatically sensing the connection of devices to a network | Nixon et al. | 4/12/1996 | 8/1/2000 | 102(e) | A36 |
| 6,111,604[4] | Digital Camera which Detects a Connection to an External Device | Hashimoto et al. | 2/21/1996 | 8/29/2000 | 102(e) | A37 |
| 6,182,145 | Method and apparatus for parallel port interconnection | Schuman et al. | 1/22/1997 | 1/30/2001 | 102(e) | A38 |
| 6,298,388 | Electronic apparatus and method for discriminating whether a first or second card is attached thereto | Taguchi | 9/16/1994 | 10/2/2001 | 102(e) | A39 |

[3] U.S. Patent No. 6,088,532 included three Japanese priority applications: Application No. JP 07-16551 (published on July 23, 1996), Application No. JP 07-16553 (published on July 23, 1996), and Application No. JP 07-16555 (published on July 23, 1996). These Japanese counterpart applications make the same or similar disclosures as U.S. Patent No. 6,088,532 and constitute 102(b) prior art.

[4] There are several other patents in the same family as U.S. Patent No. 6,111,104 which make the same disclosures for purposes of these Invalidity Contentions. The other patents in this family include U.S. Patent Nos. 5,815,201; 5,815,205; 6,344,875 and 7,046,276.

**Table II: Foreign Patent Prior Art**

| Patent No. | Inventor | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|---|
| JP 08-130702 | Satomi Tanaka et. al. | | 5/21/1996 | 102(b) | A40 |
| JP 06-83917 | Koji Kajita | | 3/25/1994 | 102(b) | A41 |
| JP 08-328990 | Tadashi Uewaki, et. al. | | 12/13/1996 | 102(b) | A42 |
| JP 02-051727 | Kiyotaka Ouchi et. al. | | 2/21/1990 | 102(b) | A43 |
| JP 04-309156 | Yasutada Kashiwagi | | 10/30/1992 | 102(b) | A44 |
| JP 08-223341 | Izumi Miyake | | 8/30/1996 | 102(b) | A45 |
| JP 07-177406 | Hirokazu Hisayoshi | | 7/14/1995 | 102(b) | A46 |

**Table III: Non-Patent References**

| Publication Title | Author | Publication Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|
| The SCSI Bus and IDE Interface Book | Friedhelm Schmidt | 6/17/1995 (German version published in 1993) | 102(b) | A47 |
| Design and Construction of a Universal Data Acquisition and Control System for Scanning Probe Microscopy | Michael Tasler | 5/96 | 102(b) | A48 |
| Data Disasters: What Not To Do | Michael Lang | Dec-93 | 102(b) | A49 |
| PC-based Data Acquisition in an Industrial Environment | Steve Martin | 1990 | 102(b) | A50 |
| Designing Control Units That Interface Peripherals to the IBM I/O Channel | Richard Keele | 1/31/1989 | 102(b) | A51 |
| "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final | | 6/21/1997 (earlier drafts published in 1996) | 102(a) | A52 |
| "July 1996 Apple article on SCSI drivers" | | July 3, 1996 | 102(b) | A53 |

| Publication Title | Author | Publication Date | Category of Prior Art | Invalidity Chart |
|---|---|---|---|---|
| "Derived Virtual Devices: A Secure Distributed File System Mechanism" | | Sep. 17, 1996 | 102(b) | A54 |

**Table IV: Prior Art Products**

| Product | Date on Sale or Used in the US | Category of Prior Art | Invalidity Chart |
|---|---|---|---|
| Casio QV-10 Camera | Before 3/4/1996 | 102(b) 102(g) | A55 |
| Kodak DCS200 Camera | 1992-1993 | 102(b) 102(g) | A56 |
| Kodak DC25 Camera | 1996 | 102(b) 102(g) | A57 |
| Kodak DCS1, DCS 3, DCS 5. Collectively, the "DCS Cameras" | 7/1995 | 102(b) 102(g) | A58 |
| Macintosh PowerBook 180 + Quadra | 1992 | 102(b) 102(g) | A59 |
| DeskLab (Gradient Technology, Inc.) | 1992 | 102(b) 102(g) | A60 |
| DASM-AD14 (Analog Corporation) | 1992 | 102(b) 102(g) | A61 |
| HP PhotoSmart Camera C5340 | March 17, 1997 | 102(a) 102(g) | A62 |

Concurrent with the service of these Invalidity Contentions, the Camera Manufacturers collectively will produce to Papst all of the items of prior art identified above. To the extent any such item is not in English, the Camera Manufacturers will produce a certified English translation of the portion(s) relied upon. Further, the Camera Manufacturers reserve the right to assert any of the items of prior art above under 35 U.S.C. § 102(g), specifically with respect to items of prior art where further investigation reveals that an author, inventor or engineer has evidence of an earlier date of invention than shown on the face of the reference or product.

## INVALIDITY CHARTS

The Camera Manufacturers identify in the charts attached as Exhibits A1 through A62 exemplary portions of each patent or printed publication where each element of each asserted

claim may be found. The Camera Manufacturers, however, maintain that a person of ordinary skill in the art of the asserted patents would determine what is described, disclosed, and taught by these publications based on the entire patent or printed publication. The Camera Manufacturers, therefore, reserve their right to rely on any and all portions of each patent or printed publication to establish invalidity under 35 U.S.C. §§ 102 and 103 in the present action.

Where prior art patents and prior art publications are identified, the Camera Manufacturers reserve the right to rely on the public use, offer for sale, or sale of the devices described in those prior art patents and prior art publications once the Camera Manufacturers have had an opportunity to take discovery of these subjects. To the extent that they are also prior art, the Camera Manufacturers reserve the right to rely upon foreign counterparts of U.S. patents identified in these Invalidity Contentions; U.S. counterparts of foreign patents and foreign patent applications identified in these Invalidity Contentions; and U.S. and foreign patents and patent applications corresponding to articles and publications identified in these Invalidity Contentions. Prior art under 35 U.S.C. §§ 102(a), 102(b), and 102(e), as well as supporting documents for prior art under 35 U.S.C. §§ 102(a), 102(b), and 102(e) (which may themselves constitute independently invalidating prior art), are identified in the invalidity charts attached as Exhibits.

## ANTICIPATION AND OBVIOUSNESS

As shown in the invalidity charts attached as Exhibits A1 through A62, the Camera Manufacturers contend that the items of prior art listed in the preceding section anticipate, expressly or inherently, and/or render obvious one or more claims of the ’399 and/or ’449 patents. Alternatively, the Camera Manufacturers contend that each of the items of prior art listed in the preceding section renders the asserted claims of the ’399 and/or ’449 patents obvious, either alone or in combination with what was known to those of ordinary skill in the art at the time of the alleged invention of the subject matter claimed in the asserted patents.[5]

[5] The Camera Manufacturers’ contentions that the prior art identified in these Invalidity Contentions renders the asserted claims obvious under 35 U.S.C. § 103 are in no way an admission or suggestion that each reference does not independently anticipate the asserted claims under 35 U.S.C. § 102.

In addition, the Camera Manufacturers contend that each of the asserted claims are obvious in light of the combined disclosures of any one or more of the references, as discussed in more detail below with respect to each of the asserted claims and as shown in the invalidity charts for each individual reference.

As a preliminary matter, the Camera Manufacturers note that the U.S. Supreme Court recently addressed the test for obviousness under 35 U.S.C. § 103 in *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007), rejecting the Federal Circuit's rigid "teaching, suggestion, or motivation" requirement in favor of a flexible, functional approach in which an explicit finding of a "motivation" to combine prior art references is not required to establish obviousness. The Supreme Court held that it is sufficient that a combination of elements was "obvious to try" holding that, "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." *Id*. at 1742.[6] The Camera Manufacturers contend as a general matter that, given the anticipated design requirements and state of the art for multi-purpose interface devices, as well as the predictable nature of the art of SCSI and USB interface standards, analog peripheral devices and various data transmission protocols and drivers, it would have been (and indeed was) obvious for one of skill in the art to make multipurpose interfaces as required by the asserted claims.

The Camera Manufacturers also contend that one of skill in the art, at the time the alleged inventions were made, would have been motivated to combine the references disclosed herein in such a way as to reach the alleged inventions. The teaching, suggestion, or motivation to combine these references, although not required, is found, explicitly or implicitly and as discussed in more detail below, in one or more of the following: his or her own knowledge or common sense; the prior art references themselves and/or the prior art as a whole, including the

[6] *See also DyStar Textilfarben GmbH & Co Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2006) ("we have repeatedly held that an implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the 'improvement' is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient…").

interrelated teachings of multiple prior art references; the subject matter acknowledged as prior art in the '399 and '449 patents; the nature of the problem to be solved and the existence of similar improvements in similar applications; design incentives and other market forces, including the advantages of creating a superior and more desirable product and the effects of demands known to the design community or present in the marketplace; the ability to implement the alleged invention as a predictable variation of the prior art; improvements in similar devices; the interrelated teachings of multiple prior art references; any needs or problems known in the field and addressed by the '399 and '449 patents; and the number of identified, predictable solutions to the problem addressed by the '399 and '449 patents. A motivation to combine the teachings of the references also existed when a given combination would result in a product that is more desirable because, for example, it would be stronger, harder, cheaper, or more durable. In addition, the subject matter and disclosures in several of the prior art references cited herein are evidence that a motivation to combine various concepts described herein did, in fact, exist, and they were, in fact, combined.

Specific combinations of references that render the asserted claims obvious are identified below, together with exemplary descriptions of specified combinations. Such descriptions are not intended to be exhaustive. The Camera Manufacturers may rely upon all or a subset of the prior art identified in these Invalidity Contentions, in any combination, depending on the Court's claim construction, further disclosure of Papst's contentions, and further investigation. Also, as the Camera Manufacturers are currently unaware of the extent, if any, to which Papst will contend that limitations of the asserted claims are not disclosed in the art identified herein as anticipatory, the Camera Manufacturers reserve the right to identify other references and combinations that may render an allegedly missing limitation obvious, including any prior art produced or identified concurrently with but not presently cited in these contentions. In addition, if and to the extent that Papst challenges the correspondence of any of these references with respect to particular limitations of the asserted claims, the Camera Manufacturers reserve their

right to supplement these Invalidity Contentions to identify the motivation to combine particular references with additional particularity.

In addition to the invalidity charts, attached as Exhibit A is an index identifying in spreadsheet format the individual limitations from Papst's asserted claims which the Camera Manufacturers believe are disclosed by each reference. This index, in conjunction with the individual invalidity charts, demonstrates the various possible combinations of disclosures from one or more of the above references that the Camera Manufacturers believe anticipate and/or render obvious each asserted claim of the '399 and '449 patents.

**Anticipation/Obviousness in Light of the Intrinsic Record and the Prior Art**

As the intrinsic record of the patents-in-suit and the references cited by the Camera Manufacturers herein demonstrate, the problems identified by the inventor of the patents-in-suit and his alleged solutions to those problems were already well known to persons of ordinary skill in the art of multi-purpose interfaces at the time of the alleged invention. These well-known problems and their solutions included widespread efforts in the computer and consumer electronics industries to make digital products, including digital cameras, seamlessly compatible with computers. For example, the patent specification acknowledges the state of the art at the time as follows:

> In a preferred embodiment of the present invention in which the interface device **10** simulates a hard disk to the host device, the interface device is automatically detected and readied for operation when the host system is powered up or booted. This corresponds to the plug-and-play standard which is currently finding increasingly widespread use. The user is no longer responsible for installing the interface device **10** on the host device by means of specific drivers which must also be loaded; instead the interface device **10** is automatically readied for operation when the host system is booted.

'399 patent, col. 8, ll. 1-11 (emphasis added). Further, the "Description of Prior Art" section of the patent specification explains that it was well known in the art for a host device to communicate with an interface device by means of an interface-specific driver installed in the host device. '399 patent, col. 2, l. 15 – col. 3, l. 21. Specifically, this section of the specification refers to an IBM Technical Disclosure Bulletin which discloses "an interface which connects a

host device to a peripheral device via a floppy disk drive interface." '399 patent, col. 3, ll. 8-10. Further, this "interface makes it possible to attach not only a floppy disk drive but also a further peripheral device to the FDD host controller of a host device. The host device assumes that a floppy disk drive is always attached to its floppy disk drive controller and communication is initiated if the address is correct." '399 patent, col. 3, ll. 13-18.

Indeed, both the inventor and the Examiner of the '399 patent acknowledged this state of the art during prosecution of the '399 patent application. In the first office action during prosecution of the '399 patent application, the Examiner stated as follows:

> Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art [AAPA] and McNeill, Jr. et al. (U.S. Patent No. 5,499,378).
>
> …AAPA teaches an interface for communication between a host device and a transmit/receive device comprising:
>
> a processor [Applicant's specification, p. 3, line 8];
>
> a memory [Applicant's specification, p. 3, line 9];
>
> a first connecting device for interfacing the host device with the interface device via a multipurpose interface of the host device [Applicant's specification, p. 3, lines 1-3];
>
> a second connecting device for interfacing the interface device with the data transmit/receive device [Applicant's specification, p. 3, lines 9-12];
>
> AAPA teaches the host device communicates with the interface device by means of an interface-specific driver installed in the host device…
>
> It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and McNeill, Jr. et al. because it would enhance the system by allowing the host device communicates [sic] with a transmit/receive device, through an interface device, by means of the standard driver in the host device instead of installing a device-specific driver into the host device.

See '399 Patent Application, Office Action of 12/18/01.

Importantly, the applicant did not dispute these findings, nor was it disputed that the McNeill, Jr. reference constituted prior art. *See* '399 Patent Applicant's Response to Office Action of 12/18/01. Instead, the applicant amended the claims to include analog limitations, and stated: "this rejection is respectfully traversed with respect to the claims as amended…. In

particular, the data transmit/receive device is arranged for providing analog data…. Since the second connecting device includes sample and hold circuits 1515 and A/D converter 1503, it is clear that the data transmit/receive device … provides analog data." *Id*. (emphasis added). Then, with regard to McNeill, Jr., the applicant admitted that the reference discloses (1) "provid[ing] access to a non-SCSI device via a SCSI bus," (2) requests are sent "in accordance with the SCSI protocol," and (3) the host can "access the [non-SCSI device] via SCSI commands." *Id*. The applicant distinguished over McNeill, Jr. by arguing that it did not disclose the analog limitations added by the claim amendments, nor did it disclose that the interface device "lies to the host computer as to the real nature of the data transmit/receive device." *Id*.

Accordingly, both the inventor and Examiner confirmed important details about the state of the art at the time of the alleged invention in the '399 and '449 patents. Specifically, it was well known in the art for a host device to communicate with a peripheral device or interface device by means of standard drivers and command protocols which were already installed on the host device.[7] The applicant's statements distinguishing over the prior art, as discussed above, made it clear that the inventor considered other limitations in his patent claims the point of novelty over the state of the art, specifically: (1) that the data transmit/receive device provides analog data to the interface device, and (2) that the interface device lies to the host computer as to the real nature of the data transmit/receive device.

As demonstrated by the prior art disclosures herein, it would have been (and indeed was) obvious to one skilled in the art to include such "analog" and "lying" characteristics in interface devices at the time of the alleged invention of the '399 and '449 patents. Accordingly, under a proper understanding of the state of the art and of the intrinsic record of the '399 and '449 patents, allowance of the asserted claims in this action is plainly refuted, and each of the asserted claims is demonstrably anticipated and/or rendered obvious as set forth herein, including within the invalidity charts attached to these Invalidity Contentions.

[7] Further, as demonstrated by the Murata reference (U.S. Patent No. 5,506,692), which was before the '399 patent Examiner, it was also well known in the art for an interface device to use virtual file systems to make the host computer think there were actual files on the data transmit/receive device. *See* Exhibit A9.

**Claim by Claim Analysis**

Below is an exemplary and representative invalidity analysis for each claim in the '399 and '449 patents that Papst has asserted in this action. The Camera Manufacturers assert that the prior art references cited in these contentions may be combined in a variety of ways (*see, e.g.,* Exhibit A), and that one of ordinary skill in the art would have known how to incorporate or substitute other references disclosing similar subject matter:

**'399 Patent, Claim 1**

Claim 1 of the '399 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,532,825 (*see* Exhibit A12); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No. 5,806,072 (*see* Exhibit A18); U.S. Patent No. 5,915,106 (*see* Exhibit A26); U.S. Patent No. 5,974,161 (*see* Exhibit A31); U.S. Patent No. 6,088,532 (*see* Exhibit A35); U.S. Patent No. 6,111,604 (*see* Exhibit A37); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); "Design and Construction of a Universal Data Acquisition and Control System for Scanning Probe Microscopy," by Michael Tasler (*see* Exhibit A48); the Casio QV-10 Camera (*see* Exhibit A55); the Kodak DCS200 Camera (*see* Exhibit A56); the Kodak DC25 Camera (*see* Exhibit A57); the Kodak DCS1, DCS 3 and DCS 5 Cameras, collectively, the "DCS Cameras" (*see* Exhibit A58); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 1 of the '399 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 1 of the '399 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47). In addition, claim

1 of the ’399 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**‘399 Patent, Claim 2**

Claim 2 of the ’399 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No. 5,915,106 (*see* Exhibit A26); U.S. Patent No. 5,974,161 (*see* Exhibit A31); U.S. Patent No. 6,088,532 (*see* Exhibit A35); “The SCSI Bus and IDE Interface Book,” by Friedhelm Schmidt (*see* Exhibit A47); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 2 of the ’399 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 2 of the ’399 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with “The SCSI Bus and IDE Interface Book,” by Friedhelm Schmidt (*see* Exhibit A47). In addition, claim 2 of the ’399 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**‘399 Patent, Claim 3**

Claim 3 of the ’399 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,532,825 (*see* Exhibit A12); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No. 5,915,106 (*see* Exhibit A26); U.S. Patent No. 5,974,161 (*see* Exhibit A31); U.S. Patent No. 6,088,532 (*see* Exhibit A35); U.S. Patent No. 6,111,604 (*see* Exhibit A37); “The SCSI Bus and IDE Interface Book,” by Friedhelm Schmidt (*see* Exhibit A47); “Design and Construction of a Universal Data Acquisition and Control System for Scanning Probe Microscopy,” by Michael

Tasler (*see* Exhibit A48); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 3 of the '399 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 3 of the '399 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47). In addition, claim 3 of the '399 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**'399 Patent, Claim 5**

Claim 5 of the '399 patent is anticipated by at least the following references: U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,915,106 (*see* Exhibit A26); U.S. Patent No. 6,111,604 (*see* Exhibit A37); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); "Design and Construction of a Universal Data Acquisition and Control System for Scanning Probe Microscopy," by Michael Tasler (*see* Exhibit A48); the Casio QV-10 Camera (*see* Exhibit A55); the Kodak DCS200 Camera (*see* Exhibit A56); the Kodak DC25 Camera (*see* Exhibit A57); the Kodak DCS1, DCS 3 and DCS 5 Cameras, collectively, the "DCS Cameras" (*see* Exhibit A58); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 5 of the '399 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 5 of the '399 patent would have been obvious in light of U.S. Patent No. 5,508,821 (*see* Exhibit A10) together with "The

SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47). In addition, claim 5 of the '399 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**'399 Patent, Claim 7**

Claim 7 of the '399 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 7 of the '399 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 7 of the '399 patent would have been obvious in light of U.S. Patent No. 5,802,325 (*see* Exhibit A17) together with "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47). In addition, claim 7 of the '399 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**'399 Patent, Claim 11**

Claim 11 of the '399 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No. 5,806,072 (*see* Exhibit A18); U.S. Patent No. 5,915,106 (*see* Exhibit A26); U.S. Patent No. 6,088,532 (*see* Exhibit A35); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); "Design and Construction of a Universal Data Acquisition and Control System for Scanning Probe Microscopy," by Michael Tasler (*see* Exhibit A48); the Kodak DCS200 Camera (*see* Exhibit A56); the Kodak DC25 Camera (*see* Exhibit A57); the Kodak DCS1, DCS 3 and DCS 5 Cameras, collectively, the "DCS Cameras" (*see* Exhibit A58); the

DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 11 of the ’399 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 11 of the ’399 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with “The SCSI Bus and IDE Interface Book,” by Friedhelm Schmidt (*see* Exhibit A47). In addition, claim 11 of the ’399 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**’399 Patent, Claim 14**

Claim 14 of the ’399 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,532,825 (*see* Exhibit A12); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No. 5,806,072 (*see* Exhibit A18); U.S. Patent No. 5,915,106 (*see* Exhibit A26); U.S. Patent No. 5,974,161 (*see* Exhibit A31); U.S. Patent No. 6,088,532 (*see* Exhibit A35); U.S. Patent No. 6,111,604 (*see* Exhibit A37); “The SCSI Bus and IDE Interface Book,” by Friedhelm Schmidt (*see* Exhibit A47); “Design and Construction of a Universal Data Acquisition and Control System for Scanning Probe Microscopy,” by Michael Tasler (*see* Exhibit A48); the Casio QV-10 Camera (*see* Exhibit A55); the Kodak DCS200 Camera (*see* Exhibit A56); the Kodak DC25 Camera (*see* Exhibit A57); the Kodak DCS1, DCS 3 and DCS 5 Cameras, collectively, the "DCS Cameras" (*see* Exhibit A58); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 14 of the ’399 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those

skilled in the art at the time of alleged invention. For example, claim 14 of the '399 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47). In addition, claim 14 of the '399 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**'399 Patent, Claim 15**

Claim 15 of the '399 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No. 5,915,106 (*see* Exhibit A26); U.S. Patent No. 6,088,532 (*see* Exhibit A35); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); and the DASM-AD14 from Analog Corporation (*see* Exhibit A61).

Claim 15 of the '399 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 15 of the '399 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47). In addition, claim 15 of the '399 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**'449 Patent, Claim 1**

Claim 1 of the '449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No. 5,806,072 (*see* Exhibit A18); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); the Casio QV-10 Camera (*see* Exhibit A55); the Kodak DCS200 Camera (*see*

Exhibit A56); the Kodak DC25 Camera (*see* Exhibit A57); the Kodak DCS1, DCS 3 and DCS 5 Cameras, collectively, the "DCS Cameras" (*see* Exhibit A58); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 11 of the ’449 patent would have also been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 1 of the ’449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,848,420 (*see* Exhibit A24). In addition, claim 1 of the ’449 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**’449 Patent, Claim 2**

Claim 2 of the ’449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5) and U.S. Patent No. 5,508,821 (*see* Exhibit A10).

Claim 2 of the ’449 patent would also have been obvious with respect to the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 2 of the ’449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,508,821 (*see* Exhibit A10) and/or U.S. Patent No. 5,463,772 (*see* Exhibit A5).

**‘449 Patent, Claim 6**

Claim 6 of the ’449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5) and U.S. Patent No. 5,802,325 (*see* Exhibit A17).

Claim 6 of the ’449 patent would also have been obvious with respect to the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 6 of the ’449 patent would have been

obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,802,325 (*see* Exhibit A17) and/or U.S. Patent No. 5,463,772 (*see* Exhibit A5).

**‘449 Patent, Claim 7**

Claim 7 of the ’449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5) and U.S. Patent No. 5,802,325 (*see* Exhibit A17).

Claim 7 of the ’449 patent would also have been obvious with respect to the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 7 of the ’449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,802,325 (*see* Exhibit A17) and/or U.S. Patent No. 5,463,772 (*see* Exhibit A5).

**‘449 Patent, Claim 8**

Claim 8 of the ’449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5) and U.S. Patent No. 5,802,325 (*see* Exhibit A17).

Claim 8 of the ’449 patent would also have been obvious with respect to the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 8 of the ’449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,802,325 (*see* Exhibit A17) and/or U.S. Patent No. 5,463,772 (*see* Exhibit A5).

**‘449 Patent, Claim 9**

Claim 9 of the ’449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 9 of the ’449 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those

skilled in the art at the time of alleged invention. For example, claim 9 of the '449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,802,325 (*see* Exhibit A17) and/or U.S. Patent No. 5,463,772 (*see* Exhibit A5). In addition, claim 9 of the '449 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**'449 Patent, Claim 12**

Claim 12 of the '449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,806,072 (*see* Exhibit A18), U.S. Patent No. 5,848,420 (*see* Exhibit A24), and/or the common knowledge of those skilled in the art at the time of alleged invention.

**'449 Patent, Claim 13**

Claim 13 of the '449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5) and U.S. Patent No. 5,802,325 (*see* Exhibit A17).

Claim 13 of the '449 patent would also have been obvious with respect to the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 13 of the '449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,802,325 (*see* Exhibit A17) and/or U.S. Patent No. 5,463,772 (*see* Exhibit A5).

**'449 Patent, Claim 15**

Claim 15 of the '449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); and the DASM-AD14 from Analog Corporation (*see* Exhibit A61).

Claim 15 of the ’449 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 15 of the ’449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,802,325 (*see* Exhibit A17) and/or U.S. Patent No. 5,463,772 (*see* Exhibit A5). In addition, claim 15 of the ’449 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**‘449 Patent, Claim 16**

Claim 16 of the ’449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); “The SCSI Bus and IDE Interface Book,” by Friedhelm Schmidt (*see* Exhibit A47); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 16 of the ’449 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 16 of the ’449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,802,325 (*see* Exhibit A17) and/or U.S. Patent No. 5,463,772 (*see* Exhibit A5). In addition, claim 16 of the ’449 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**‘449 Patent, Claim 17**

Claim 17 of the ’449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No.

5,806,072 (*see* Exhibit A18); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 17 of the '449 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 17 of the '449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,848,420 (*see* Exhibit A24). In addition, claim 17 of the '449 patent would have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**'449 Patent, Claim 18**

Claim 1 of the '449 patent is anticipated by at least the following references: U.S. Patent No. 5,463,772 (*see* Exhibit A5); U.S. Patent No. 5,506,692 (*see* Exhibit A9); U.S. Patent No. 5,508,821 (*see* Exhibit A10); U.S. Patent No. 5,802,325 (*see* Exhibit A17); U.S. Patent No. 5,806,072 (*see* Exhibit A18); "The SCSI Bus and IDE Interface Book," by Friedhelm Schmidt (*see* Exhibit A47); the DeskLab from Gradient Technology, Inc.) (*see* Exhibit A60); the DASM-AD14 from Analog Corporation (*see* Exhibit A61); and the HP PhotoSmart Camera C5340 (*see* Exhibit A62).

Claim 18 of the '449 patent would also have been obvious with respect to each of the references above, whether alone, in combination with other references disclosing similar subject matter as shown in the attached invalidity charts, or in light of the common knowledge of those skilled in the art at the time of alleged invention. For example, claim 18 of the '449 patent would have been obvious in light of U.S. Patent No. 5,506,692 (*see* Exhibit A9) together with U.S. Patent No. 5,848,420 (*see* Exhibit A24). In addition, claim 18 of the '449 patent would

have been obvious based on a variety of combinations of references, as shown in the attached Exhibit A.

**INVALIDITY UNDER 35 U.S.C. § 112**

**I. U.S.C. § 112, ¶2: INDEFINITENESS**

Claims 3, 7, 8 and 14 of the '399 patent and claims 1, 9, 12, 15, 17 and 18 of the '449 patent are invalid for failure to comply with the definiteness requirements of 35 U.S.C. § 112, ¶ 2, including the requirement that the claims particularly point out and distinctly claim the subject matter which the patentee regards as its alleged invention such that one skilled in the relevant art would be reasonably apprised of the bounds of the asserted claims when read in light of the specification. By way of example only, the Camera Manufacturers provide the following reasons that certain asserted claims are invalid for indefiniteness:

Claims 1, 17 and 18 of the '449 patent are invalid for indefiniteness because the phrase "simulating a virtual file system" recited in those claims is ambiguous, vague, nonsensical and not supported by the specification or prosecution history. To the extent this phrase has any meaning to one skilled in the art, "simulating" is redundant with "virtual" in that "virtual" itself refers to simulation of the structure of an actual file system stored on a hard disk drive or the like. There is no support whatsoever in the intrinsic evidence for "simulating" a "virtual file system," which is itself a simulation of an actual file system. Thus, because one skilled in the art would have no way of interpreting the nonsensical claim language "simulating a virtual file system," claims 1, 17 and 18 of the '449 patent are invalid for indefiniteness.

Claim 7 of the '399 patent is invalid for indefiniteness because the phrase "the signaled hard disk drive" recited in the claim lacks an antecedent basis and is irreconcilably inconsistent with the prosecution history of the '399 patent. Claim 7 depends from dependent claim 2 and independent claim 1. Claim 1 requires that a "first command interpreter" send a signal to a host device "regardless of the type of the data transmit/receive device attached to the second connecting device . . . that it is an input/output device customary in a host device." This claim language requires a first command interpreter that "lies to the host computer as to the real nature

of the data transmit/receive device" as argued during prosecution of the '399 patent to overcome a rejection based upon the McNeill, Jr. prior art reference. See '399 Patent Applicant's Response to Office Action of 12/18/01 (emphasis added). Thus, in the context of claim 7, the data transmit/receive device recited in independent claim 1 cannot be a hard disk drive, since, as recited in claim 2 (from which claim 7 also depends), the interface device signals that the host device is "communicating with a hard disk," and this must be a lie according to the prosecution history. That claim 7 recites "the signaled hard disk drive" means that "the data transmit/receive device" from independent claim 1 is a hard disk drive, which is irreconcilably inconsistent with the requirement from the prosecution history.[8] Accordingly, because claim 7 cannot be construed in a manner consistent with the prosecution history, it is invalid for indefiniteness.

Similarly, claim 15 of the '449 patent is invalid for indefiniteness because the claimed limitation, "wherein the storage device is a hard disk," while affirmatively reciting the existence of a "storage device and a "hard disk," can only properly be interpreted to not have such elements to be consistent with the prosecution history of the patents-in-suit. Claim 15 depends from independent claim 1. Claim 1 requires that a "the interface device" send a signal to a host device "regardless of the type of the data transmit/receive device attached to the second connecting device . . . that it is a storage device customary in a host device." This claim language requires that the interface device "lies to the host computer as to the real nature of the data transmit/receive device" as argued during prosecution of the parent '399 patent to overcome a rejection based upon the McNeill, Jr. prior art reference. See '399 Patent Applicant's Response to Office Action of 12/18/01 (emphasis added). Thus, in the context of claim 15, the storage device (data transmit/receive device) recited in independent claim 1 cannot be a hard disk, since the interface device signals that the data transmit/receive device is "a hard disk," and this must be a lie according to the prosecution history. Since claim 15 recites "the storage device is a hard disk" the "data transmit/receive device" from independent claim 1 is a hard disk drive. This is

[8] Similarly, there is no antecedent basis (in either claim 1 or claim 2) for "the signaled hard disk drive" in claim 7.

irreconcilably inconsistent with the prosecution history, and because claim 15 of the '449 patent cannot be construed so as to resolve this inconsistency, it is invalid for indefiniteness.

Claim 12 of the '449 patent is invalid for indefiniteness because the phrases "the file allocation table" and "the data file" recited in the claims lack an antecedent basis. Claim 12 is recited to depend from claim 1. However, claim 1 provides neither a recitation of "a file allocation table" nor "a data file." This is an error in the claim drafting that results in claim 12 being invalid for indefiniteness. Further, to the extent Papst may argue that the Court should "fix" claim 12 to depend from another claim in an attempt to cure its indefiniteness, there is no such way to fix the claim. In particular, the only possible antecedent bases for "a file allocation table" are recited in independent claims 17 and 18, while the only possible antecedent basis for "the data file" is recited in claim 2, which depends from independent claim 1. Thus, because there is no single claim from which claim 12 could properly depend in order to provide the necessary antecedent bases, claim 12 is invalid for indefiniteness.

Similarly, claim 9 of the '449 patent is invalid for indefiniteness because the phrase "the file allocation table" recited in the claims lacks an antecedent basis. Claim 9 is recited to depend from claim 1. However, claim 1 does not provide any antecedent recitation of "a file allocation table." For reasons similar to those discussed above with respect to claim 12 of the '449 patent, claim 9 of the '449 patent is invalid for indefiniteness.

Claims 3 and 8 of the '399 patent are invalid for indefiniteness because the phrase "the memory means" recited in the claims lacks an antecedent basis. These claims both depend from independent claim 1, which does not provide any antecedent recitation of "a memory means."

Claim 14 of the '399 patent is invalid for indefiniteness because the phrase "the usual driver" recited in the claim lacks an antecedent basis. This independent claim does not provide any antecedent recitation of "a usual driver."

Claim 18 of the '449 patent is invalid for indefiniteness because the phrase "the usual driver" recited in the claim lacks an antecedent basis. This independent claim does not provide any antecedent recitation of "a usual driver."

## II. 35 U.S.C. § 112, ¶1: INSUFFICIENT WRITTEN DESCRIPTION / ENABLEMENT

Claims 1-3, 5, 7, 11, 14-15 of the '399 patent and claims 1-2, 6-7, 13, 15-18 of the '449 patent are invalid for failure to comply with the written description and enablement requirements of 35 U.S.C. § 112, ¶ 1, including the requirement that the specification describe and enable the full scope of the claimed invention. By way of example only, the Camera Manufacturers provide the following reasons that certain asserted claims are invalid for lack of written description and/or enablement:

Claims 1-3, 5, 7 and 11 of the '399 patent are invalid for failure to comply with the enablement and written description requirements of 35 U.S.C. § 112, ¶ 1. In particular, these claims lack enablement because they claim "a first command interpreter" and "and a second command interpreter," yet the patent does not describe or teach those skilled in the art how to implement or make such command interpreters. With regard to the command interpreters, independent claims 1 and 11 recite the following:

> …wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter
>
> … wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is an input/output device customary in a host device…
>
> … wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device.

'399 Patent, claims 1 and 11, col. 12, l. 60 – col. 13, l. 13; col. 14, ll. 1-20.

The specification of the '399 patent, however, fails to provide descriptions sufficient to teach those skilled in the art how to implement the claimed first and second command interpreters without undue experimentation. The only disclosure in the '399 patent specification pertaining to the command interpreters is as follows:

> In a preferred embodiment of the present invention, the digital signal processor **13**, which need not necessarily be implemented as a digital signal processor but may be any other kind of microprocessor, comprises a first and a second command interpreter. The first command interpreter carries out the steps described above whilst the second command interpreter carries out the read/write assignment to specific functions. If the user now wishes to read data from the data transmit/receive device via the line **16**, the host device sends a command, for example "read file xy", to the interface device. As described above, the interface device appears to the host device as a hard disk. The second command interpreter of the digital signal processor now interprets the read command of the host processor as a data transfer command, by decoding whether "xy" denotes, for example, a "real-time input" file, a "configuration" file or an executable file, whereby the same begins to transfer data from the data transmit/receive device via the second connecting device to the first connecting device and via the line **11** to the host device.

'399 Patent, col. 14, ll. 48-67. This disclosure is woefully insufficient to teach those skilled in the art how to implement software capable of performing the steps described for the first and second command interpreters. For example, there is no teaching as to how the second command interpreter "interprets" or "decodes" a read command of the host processor, or how the second command interpreter subsequently translates these commands into device-specific commands that can be used to initiate data transfer from a variety of data transmit/receive devices, especially for data transmit/receive devices providing a "real-time input" file consisting of a stream of analog data.

One skilled in the art would not be able to write software capable of performing the claimed scope of the command interpreters based on the disclosure above. *See, e.g., White Consol. Indus., Inc. v. Vega Servo-Control, Inc.*, 713 F.2d 788 (Fed. Cir. 1983) (disclosure of "language translator" and characteristics inadequate where development of equivalent translator would require undue experimentation). Since the '399 patent specification fails to teach those skilled in the art how to make and use the claimed "command interpreters" without undue experimentation, claims 1 and 11 of the '399 patent are invalid for failure to comply with the enablement and written description requirements of 35 U.S.C. § 112, ¶ 1.

Further, claims 1-3, 5, 7, 11, 14-15 of the '399 patent and claims 1-2, 6-7, 13, 15-18 of the '449 patent are invalid for failure to comply with the written description and enablement

requirements of 35 U.S.C. § 112, ¶ 1, including the requirement that the specification describe and enable the full scope of the claimed invention, in that the disclosure lacks a sufficient disclosure to teach one of ordinary skill in the art without undue experimentation how to implement any means in the "host device" which would allow or cause:

> the host device [to] communicate[] with the interface device by means of the driver for the input/output device customary in a host device,

'399 Patent, claim 1;

> the host device [to] communicate[] with the interface device by means of the specific driver for the multi-purpose interface,

'399 Patent, claim 11;

> the host device [to] communicate[] with the interface device by means of the driver for the storage device customary in a host device, or

'449 Patent, claim 1;

> the host device [to] communicate[] with the interface device by means of the usual driver for the storage device.

'449 Patent, claim 18.

Papst is expected to argue that these claims should be interpreted to describe an interface device and host device wherein it is not necessary for the user to load a specific driver onto the host to allow the host device to communicate with the interface device connected to the multi-purpose interface of the host device. However, the disclosures of the '399 and '449 patents contain no description of any means, either hardware or software, for a "driver for the input/output device customary in a host device," *etc*., to communicate through the multi-purpose interface to the interface device without the user having to load a specific driver onto the host. Accordingly, claims 1-3, 5, 7, 11, 14-15 of the '399 patent and claims 1-2, 6-7, 13, 15-18 of the '449 patent are invalid for failure to comply with the enablement and written description requirements of 35 U.S.C. § 112, ¶ 1.

Claim 7 of the '399 patent and claims 1-2, 6-7, 13, 15-18 of the '449 patent are also invalid for failure to comply with the enablement and written description requirements of 35

U.S.C. § 112, ¶ 1 because the specification fails to describe or enable "virtual files," "virtual boot sequence[s]" and/or "simulating a virtual file system." For example, there is no adequate description explaining the structure of a virtual file, virtual boot sequence or virtual file system, explaining how a "virtual" file, boot sequence or file system is different than an actual file, boot sequence or file system or explaining how a virtual file in a virtual file system can be used to access data on the data transmit/receive device. Accordingly, claim 7 of the '399 patent and claims 1-2, 6-7, 13, 15-18 of the '449 patent are invalid under 35 U.S.C. § 112, ¶ 1.

Claims 1-2, 6-7, 13, 15-18 of the '449 patent are also invalid for failure to comply with the enablement and written description requirements of 35 U.S.C. § 112, ¶ 1 because the specification fails to describe or enable "simulating a virtual file system." There is no description of "simulating" a virtual file system in the specification and, as drafted, these claims are inoperable. Accordingly, claims 1-2, 6-7, 13, 15-18 of the '449 patent are invalid under 35 U.S.C. § 112, ¶ 1.

Claims 1-3, 5, 7, 11, 14-15 of the '399 patent and claims 1-2, 6-7, 13, 15-18 of the '449 patent are also invalid for failure to comply with the enablement and written description requirements of 35 U.S.C. § 112, ¶ 1 because the specification fails to describe or enable the full scope of the claims, at least as construed by Papst. For example, Papst is seeking to construe the claims of the '399 and '449 patents to cover digital camera and audio devices that directly connect to a host computer without needing to use any separate "interface device" and to cover devices where there is no actual communication between the alleged data transmit/receive device and the alleged host system. The specifications of the '399 and '449 patents, however, do not describe or enable such systems. *See LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336 (Fed. Cir. 2005); *Sitrick v. Dreamworks, LLC,* 516 F.3d 993 (Fed. Cir. 2008) (claims invalid under 35 U.S.C. § 112 where they covered integrating a user's audio signal or visual image into a preexisting video game or movie, but specification only described video game embodiment). Accordingly, the asserted claims are invalid under 35 U.S.C. § 112, ¶ 1.

Dated: June 18, 2008

By: /s/ Rachel M. Capoccia____
Rachel M. Capoccia, Esq.

***For The Victor Company of Japan Parties***
Rachel M. Capoccia, Esq.
HOGAN & HARTSON LLP
1900 Avenue of the Stars
Suite 1400
Los Angeles, California 90067
Email: rmcapoccia@hhlaw.com
Tel: (310) 785-4744
Fax: (310) 785-4601

***For The Matsushita Electric Industrial Co., Ltd. Parties***
Richard de Bodo
HOGAN & HARTSON LLP
1900 Avenue of the Stars
Suite 1400
Los Angeles, California 90067
Email: rdebodo@hhlaw.com
Tel: (310) 785-4694
Fax: (310) 785-4601

***For The Casio Parties***
J. Kevin Fee
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, NW
Washington, D.C. 20004
jkfee@morganlewis.com

***For The Samsung Parties***
Patrick J. Kelleher
Drinker Biddle & Reath LLP
191 North Wacker Drive
Suite 3700
Chicago, IL 60606-1698
Phone: (312) 569-1375
Fax: (312) 569-3375
patrick.kelleher@dbr.com

***For Fujifilm U.S.A., Inc.***
Sten A. Jensen
Hogan & Hartson, LLP
555 Thirteenth Street, N.W.
Washington, DC 20004
Phone: (202) 637-5600
Fax: (202) 637-5910

sajensen@hhlaw.com

***For Fujifilm Corp.***
Steven J. Routh
Hogan & Hartson, LLP
555 Thirteenth Street, N.W.
Washington, DC 20004
Phone: (202) 637-5600
Fax: (202) 637-5910
sjrouth@hhlaw.com

***For the Olympus Parties***
Richard de Bodo
Hogan & Hartson, LLP
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067
Phone: (310) 785-4694
Fax: (310) 785-4601
rdebodo@hhlaw.com

***For Hewlett-Packard Company***:
Heather N. Mewes
Fenwick & West LLP
555 California Street, Suite 1200
San Francisco, CA 94104
Phone: (415) 875-2300
Fax: (415) 281-1350
hmewes@fenwick.com

**CERTIFICATE OF SERVICE**

I, Rachel M. Capoccia, hereby certify that on this 18th day of June 2008, a true and correct copy of the foregoing **CAMERA MANUFACTURERS' INVALIDITY CONTENTIONS** was served on counsel of record by email as follows:

***For Papst Licensing GmbH & Co. KG*** (via e-mail):
Robert F. Muse
STEIN, MITCHELL & MEZINES LLP
1100 Connecticut Avenue, NW
Suite 1100
Washington, DC 20036-4195
(202) 737-7777
(202) 296-8312 (fax)
rmuse@steinmitchell.com

Jerold B. Schnayer
WELSH & KATZ, LTD
120 South Riverside Plaza
22nd Floor
Chicago, IL 60606
(312) 655-1500
(312) 655-1501 (fax)
jbschnayer@welshkatz.com

***For The Victor Company of Japan Parties*** (via e-mail):
Rachel M. Capoccia, Esq.
HOGAN & HARTSON LLP
1900 Avenue of the Stars
Suite 1400
Los Angeles, California 90067
Email: rmcapoccia@hhlaw.com
Tel: (310) 785-4744
Fax: (310) 785-4601

***For The Matsushita Electric Industrial Co., Ltd. Parties*** (via e-mail):
Richard de Bodo
HOGAN & HARTSON LLP
1900 Avenue of the Stars
Suite 1400
Los Angeles, California 90067
Email: rdebodo@hhlaw.com
Tel: (310) 785-4694
Fax: (310) 785-4601

***For The Casio Parties*** (via e-mail):
J. Kevin Fee
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, NW
Washington, D.C. 20004
jkfee@morganlewis.com

***For The Samsung Parties*** (via e-mail):
Patrick J. Kelleher
Drinker Biddle & Reath LLP
191 North Wacker Drive
Suite 3700
Chicago, IL 60606-1698
Phone: (312) 569-1375
Fax: (312) 569-3375
patrick.kelleher@dbr.com

***For Fujifilm U.S.A., Inc.*** (via e-mail):
Sten A. Jensen
Hogan & Hartson, LLP
555 Thirteenth Street, N.W.
Washington, DC 20004
Phone: (202) 637-5600
Fax: (202) 637-5910
sajensen@hhlaw.com

***For Fujifilm Corp.*** (via e-mail):
Steven J. Routh
Hogan & Hartson, LLP
555 Thirteenth Street, N.W.
Washington, DC 20004
Phone: (202) 637-5600
Fax: (202) 637-5910
sjrouth@hhlaw.com

***For the Olympus Parties*** (via e-mail):
Richard de Bodo
Hogan & Hartson, LLP
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067
Phone: (310) 785-4694
Fax: (310) 785-4601
rdebodo@hhlaw.com

***For the Ricoh Parties*** (via e-mail):
Paul Devinsky
MCDERMOTT, WILL & EMERY
600 13th Street, NW
Washington, DC 20005-3096
(202) 756-8369
Fax: (202) 756-8087
Email: pdevinsky@mwe.com

***For Hewlett-Packard Company*** (via e-mail):
Heather N. Mewes
Fenwick & West LLP
555 California Street, Suite 1200
San Francisco, CA 94104
Phone: (415) 875-2300
Fax: (415) 281-1350
hmewes@fenwick.com

***For the Nikon Parties*** (via e-mail):
Marc S. Blackman
Jones Day
77 West Wacker Drive, Suite 3500
Chicago, IL 60601
Phone: (312) 782-3939
Fax: (312-782-8585
msblackman@jonesday.com

/s/ Rachel M. Capoccia

# Exhibit A
## Key for Camera Manufacturers' Prior Art

The following is the Camera Manufacturers' key of codes corresponding to limitations from Papst's asserted claims in the '399 and '449 patents. In the right-hand column are the claims in which the limitations appear. These codes appear in the columns of the following spreadsheet, which shows disclosures in the Camera Manufacturers' prior art. The codes also appear in the invalidity charts for each prior art reference, which are attached as Exhibits to the Camera Manufacturers' Invalidity Contentions.

| Claim Limitation | Code | Claims |
|---|---|---|
| An interface device for communication between | A | All independents |
| a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface | B1 | '399: 1, 14<br>'449: 1, 18 |
| a host device, which comprises a multi-purpose interface and a specific driver for this interface | B2 | '399: 11<br>'449: 17 |
| and a data transmit/receive device | C | All independents |
| [the data transmit/receive device arranged for providing analog data] | C1 | '399: 1, 11, 14 |
| a processor | D | '399:1,11; '449:1,17 |
| [wherein processor is a digital signal processor (DSP)] | D* | '399: 5 |
| a memory | E | '399:1,11; '449:1,17 |
| [wherein memory has data buffer to buffer data transmitted from device to host] | E* | '399: 3; '449: 16 |
| a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device | F | All independents |
| a second connecting device for interfacing the interface device with the data transmit/receive device, | G | All independents |
| the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and | G1 | '399: 1, 11, 14 |
| an analog-to-digital converter for converting data sampled by the sampling circuit into digital data | G2 | '399: 1, 11, 14 |
| where the interface device is configured using the processor and the memory | H | '399:1,11; '449:1,17 |
| [to include a first command interpreter and a second command interpreter,] | H1 | '399: 1,11 |
| [wherein the first command interpreter is configured] | | |
| in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | I | All independents |
| sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | J | All independents |
| which signals to the host device that it is an input/output device customary in a host device | K1 | '399: 1, 11, 14 |
| which signals to the host device that it is a storage device customary in a host device, | K2 | '449: 1, 17, 18 |
| [wherein the storage device is a hard disk] | K2* | '449: 15 |
| whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device | L1 | '399: 1, 14 |
| whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device | L2 | '449: 1, 18 |
| whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface | L3 | '399: 11; '449: 17 |
| [wherein the second command interpreter is configured to] | | |
| interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device | M | '399: 1, 11, 14 |
| wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure | N1 | '449: 1 |
| wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure | N2 | '449: 17, 18 |

| Claim Limitation | Code | Claims |
|---|---|---|
| wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk | B*1 | ‘399: 2 |
| wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive | B*1 | ‘399: 15 |
| wherein the specific driver for the multi-purpose interface is an ASPI manager | B*3 | ‘399: 13 |
| which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device | N*1 | ‘399:7 |
| in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device | N*5 | ‘449: 2 |
| wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host | N*8 | ‘449: 6 |
| wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device | N*9 | ‘449: 7 |
| wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host | N*10 | ‘449: 8 |
| wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device | N*11 | ‘449: 9 |
| wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host | N*14 | ‘449: 12 |
| wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device | N*15 | ‘449: 13 |

EXHIBIT A
(U.S. PATENT PRIOR ART)

| (Patent No.) | Title | Inventor or Author | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | 399 449 Code | 1,11,14 1,17,18 A | 1,14 1,18 B1 | 11 17 B2 | 1,11,14 1,17,18 C | 1,11,14 C1 | 1,11 1,17 D | 5 D* | 1,11 1,17 E | 3 16 E* | 1,11,14 1,17,18 F | 1,11,14 1,17,18 G | 1,11,14 G1 | 1,11,14 G2 | 1,11 1,17 H | 1,11 H1 | 1,11,14 1,17,18 I | 1,11,14 1,17,18 J | 1,11,14 1,17,18 K1 | 1,17,18 K2 | 15 K2* | 1,14 L1 | 1,18 L2 | 11 17 L3 | 1,11,14 M | 1 N1 | 17,18 N2 | 2,15 B*1 | 13 B*3 | 7 N*1 | 2 N*5 | 6 N*8 | 7 N*9 | 8 N*10 | 9 N*11 | 12 N*14 | 13 N*15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,901,275 | Analog Data Acquisition Apparatus and Method Provided With Electro-Optical Isolation | Hardie et al. | 9/4/1987 | 2/13/1990 | 102(b) | | X | X | | X | X | X | | X | X | X | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| 5,297,124 | Tape Drive Emulation System for a Disk Drive | Plotkin et al. | 4/24/1992 | 3/22/1994 | 102(b) | | X | X | | X | | X | X | X | X | | X | | | X | X | | | X | X | | X | X | | X | X | | | | | | | | | |
| 5,430,855 | Disk Drive Array Memory System Using Nonunifrom Disk Drives | Walsh | 2/6/1991; 8/31/1994 | 7/4/1995 | 102(b) | | X | X | | X | | X | | X | | | X | | | X | | | | X | X | | X | X | | X | X | | | | | | | | | |
| 5,440,699 | System by which a remote computer receives screen images from and transmits commands to a host computer | Farrand et al. | 7/24/1991 | 8/8/1995 | 102 (b) | | X | X | | X | | X | | X | X | X | X | X | X | | | | X | X | | | X | | | | | | | | | | | | | |
| 5,463,772 | Transparent peripheral file systems with on-board compression, decompression, and space management | Thompson et al. | 4/23/1993 | 10/31/1995 | 102 (b) | | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X |
| 5,479,206 | Imaging System, Electronic Camera, Computer System for Controlling Said Electronic Camera, And Methods of Controlling Same | Ueno, et al. | 2/2/1993 | 12/26/1995 | 102(b) | | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | | | | | | | | | | |
| 5,493,335 | Single Sensor Color Camera With User Selectable Image Record Size | Parulski, et al. | 6/30/1993 | 2/20/1996 | 102(b) | | X | X | | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | X | | | | | | | | | | | |
| 5,499,378 | Small Computer System Emulator for Non-local SCSI Devices | McNeill | 6/21/1994 | 3/12/1996 | 102(b) | | X | X | | X | | X | | X | X | X | X | | | X | | X | X | X | X | X | X | X | | X | | | | | | | | | | |
| 5,506,692 | Image Handling Apparatus Having File System Emulation Means | Murata | 6/14/1994 | 4/9/1996 | 102(b) | | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | | |
| 5,508,821 | Image Scanner and Image Forming Apparatus With An Interface for Connection With an External Computer | Murata | 3/23/1993 | 4/16/1996 | 102(b) | | X | X | | X | X | X | | X | X | X | X | X | X | X | X | X | | | | X | X | X | X | X | | | | X | | | | | | | |

EXHIBIT A
(U.S. PATENT PRIOR ART)

| (Patent No.) | Title | Inventor or Author | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | 399 / 449 / Code | 1,11,14 / 1,17,18 / A | 1,14 / 1,18 / B1 | 11 / 17 / B2 | 1,11,14 / 1,17,18 / C | 1,11,14 / C1 | 1,11 / 1,17 / D | 5 / D* | 1,11 / 1,17 / E | 3 / 16 / E* | 1,11,14 / 1,17,18 / F | 1,11,14 / 1,17,18 / G | 1,11,14 / G1 | 1,11,14 / G2 | 1,11 / 1,17 / H | 1,11 / H1 | 1,11,14 / 1,17,18 / I | 1,11,14 / 1,17,18 / J | 1,11,14 / 1,17,18 / K1 | 1,17,18 / K2 | 15 / K2* | 1,14 / L1 | 1,18 / L2 | 11 / 17 / L3 | 1,11,14 / M | 1 / N1 | 17,18 / N2 | 2,15 / B*1 | 13 / B*3 | 7 / N*1 | 2 / N*5 | 6 / N*8 | 7 / N*9 | 8 / N*10 | 9 / N*11 | 12 / N*14 | 13 / N*15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,532,825 | Add-On Scanner for Existing Ink Jet Printer | Lim et al. | 8/30/1993 | 7/2/1996 | 102(b) | | X | X | | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | | | X | | | X | | | | | | | | | | | |
| 5,539,535 | Portable Electronic Still Camera Reording Optical Images of Subjects in a Memory Which Facilitates Memory Access From an External Request | Aizawa, et al. | 3/22/1994 | 7/23/1996 | 102(b) | | X | X | | X | X | X | | X | X | X | X | X | X | | | | | | | | | | | X | | | | | | | | | | | |
| 5,548,782 | Apparatus for Preventing Transferring of Data With Peripheral Device for Period of Time In Response to Connection or Disconnecting of the Device with the Apparatus | Michael et al. | 5/7/1993 | 8/20/1996 | 102(b) | | X | X | | X | | X | | X | | X | X | | | X | | | | X | X | | X | X | | X | | | | | | | | | | | |
| 5,692,159 | Configurable digital signal interface using field programmable gate array to reformat data | Shand | 5/19/1995 | 11/25/1997 | 102(e) | | X | X | | X | X | X | | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | | | | | | | |
| 5,724,155 (JP 7-202982) | Electronic imaging system | Saito | 12/30/1994 | 3/3/1998 (JP counterparts were published on 8/4/1995) | 102(b) (JP counterparts) | | X | X | | X | X | X | | X | | X | X | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| 5,754,227 (JP 08-98125) | Digital Electronic Camera Having an External Input/Output Interface Through Which The Camera is Monitored and Controlled | Fukuoka | 9/28/1995 | 3/19/1998 (JP counterparts were published on 4/12/1996) | 102(b) (JP counterparts) | | X | X | | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| 5,802,325 | Mass Memory Card with Input/Output Function | Le Roux | 3/20/1995 | PCT Pub. 01/20/1994; Issue 9/1/1998 | 102(b) | | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | | | X |
| 5,806,072 (JP 05-181905, JP 05-197844, JP 05-233771, JP 05-266156, JP 05-307593, JP 05-325500, JP 06-44318, JP 06-149905, JP 06-153140) | Electronic Imaging Apparatus Having Hierarchical Image Data Storage Structure for Computer Compatible Image Data Management | Kuba et al. | 12/21/1992 | 9/8/1998 (JP counterparts were published on 7/23/1993, 8/6/1993, 9/10/1993, 10/15/1993, 11/19/1993, 12/10/1993, 2/18/1994, 5/31/1994, 5/31/1994, respectively) | 102(b) (JP counterparts) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | | | | X | X | X | X |

EXHIBIT A
(U.S. PATENT PRIOR ART)

| (Patent No.) | Title | Inventor or Author | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | 399 Code | 1,11,14 1,17,18 A | 1,14 1,18 B1 | 11 17 B2 | 1,11,14 1,17,18 C | 1,11,14 C1 | 1,11 1,17 D | 5 D* | 1,11 1,17 E | 3 16 E* | 1,11,14 1,17,18 F | 1,11,14 1,17,18 G | 1,11,14 G1 | 1,11,14 G2 | 1,11 1,17 H | 1,11 H1 | 1,11,14 1,17,18 I | 1,11,14 1,17,18 J | 1,11,14 K1 | 1,11,14 1,17,18 K2 | 15 K2* | 1,14 L1 | 1,18 L2 | 11 17 L3 | 1,11,14 M | 1 N1 | 17,18 N2 | 2,15 B*1 | 13 B*3 | 7 N*1 | 2 N*5 | 6 N*8 | 7 N*9 | 8 N*10 | 9 N*11 | 12 N*14 | 13 N*15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,812,879 | External Multiple Peripheral Interface to Computer Serial Port Using Individually Configured Parallel Port Terminals | Moro | 4/19/1993 | 9/22/1998 | 102(e) | | X | X | X | X | X | X | | X | X | X | X | X | X | X | | | | | | | | | X | | | | | | | | | | | | |
| 5,815,201 (JP 08-228321, JP 08-237526, JP 08-298614) | Method and System for Reading and Assembling Audio and Image Information for Transfer out of a Digital Camera | Hashimoto, et al. | 2/21/1996 | 9/29/1998 (JP counterparts were published on 9/3/1996, 9/13/1996, 11/12/1996, respectively) | 102(b) (JP counterparts) | | X | X | | X | X | X | | X | X | X | X | X | X | X | | | | | | | X | X | | X | | | | | | | | | | | |
| 5,815,205 (JP 08-228321, JP 08-237526, JP 08-298614) | External Communication Interace for a Digital Camera | Hashimoto, et al. | 2/21/1996 | 9/29/1998 (JP counterparts were published on 9/3/1996, 9/13/1996, 11/12/1996, respectively) | 102(b) (JP counterparts) | | X | X | | X | X | X | | X | X | X | X | X | X | X | | | | | | | X | X | | X | | | | | | | | | | | |
| 5,841,471 | Timing Control for a Digitally Interfaced Camera Using Variable Line Readout Intervals | Endsley et al. | 9/12/1996 | 11/24/1998 | 102(e) | | X | X | | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| 5,844,961 | Filmless Digital X-Ray System | McEvoy, et al. | 7/26/1996 7/26/1995 | 12/1/1998 | 102(e) | | X | X | | X | X | X | | X | X | X | X | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| 5,848,420 | System and Method for Accessing Date of a Digital Camera from a Personal Computer | Xu | 6/14/1996 | 12/8/1998 | 102(e) | | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | | | X | | | | | X | X |
| 5,914,748 | Method and Apparatus for Generating a Composite Image Using the Difference of Two Images | Parulski et al. | 8/30/1996 | 6/22/1999 | 102(e)* | | X | X | | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | X | | | | | | | | | | | |
| 5,915,106 | Method and System for Operating a Scanner Which Emulates a Disk Drive | Ard | 3/20/1997 | 6/22/1999 | 102(e)* | | X | X | | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | | | | | | | | | | |
| 5,920,709 | Bus Interface for IDE Device | Hartung, et al. | 11/18/1996 6/4/1996 | 7/6/1999 | 102(e) | | X | X | X | X | | X | | X | | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | |
| 5,926,208 | Video Compression and Decompression Arrangement Having Reconfigurable Camera and Low-Bandwidth Transmission Capability | Noonen et al. | 9/6/1996 | 7/20/1999 | 102(e) | | X | X | | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | X | | | | | | | | | | | |

EXHIBIT A
(U.S. PATENT PRIOR ART)

| (Patent No.) | Title | Inventor or Author | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | 399 449 Code | 1,11,14 1,17,18 A | 1,14 1,18 B1 | 11 17 B2 | 1,11,14 1,17,18 C | 1,11,14 C1 | 1,11 1,17 D | 5 D* | 1,11 1,17 E | 3 16 E* | 1,11,14 1,17,18 F | 1,11,14 1,17,18 G | 1,11,14 G1 | 1,11,14 G2 | 1,11 1,17 H | 1,11 H1 | 1,11,14 1,17,18 I | 1,11,14 1,17,18 J | 1,11,14 1,17,18 K1 | 1,11,14 1,17,18 K2 | 15 K2* | 1,14 L1 | 1,18 L2 | 11 17 L3 | 1,11,14 M | N1 | 1 17,18 N2 | 2,15 B*1 | 13 B*3 | 7 N*1 | 2 N*5 | 6 N*8 | 7 N*9 | 8 N*10 | 9 N*11 | 12 N*14 | 13 N*15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,928,347 | Universal Memory Card Interface Apparatus | Jones, et al. | 11/18/1997 | 7/27/1999 | 102(e) | | X | X | | X | | X | | X | X | X | X | | | X | | | | | | | X | X | | | | | | | | | | | | | |
| 5,969,750 | Moving picture camera with universal serial bus interface | Hsieh | 9/4/1996 | 10/19/1999 | 102(e) | | X | X | X | X | X | X | | X | | X | X | | X | | | | X | X | | | X | | | | | | | | | | | | | | |
| 5,974,161 | Detachable card for capturing graphics | York | 3/1/1996 | 10/26/1999 | 102(e) | | X | X | | X | X | X | | X | X | X | X | X | X | X | X | X | X | x | | | X | | | | | X | | | | | | | | | |
| 5,991,530 (JP 06-230855, JP 06-230856, JP 06-230859, JP 06-230858, JP 06-231523, JP 06-266471, JP 06-290004) | Interface device receivable in card storage device slot of host computer | Okada et al. | 10/22/1997 Continuation of application filed 1/31/94 | 11/23/1999 (JP counterparts were published on 8/19/1994, 8/19/1994, 8/19/1994, 8/19/1994, 8/19/1994, 9/22/1994, 10/18/1994) | 102(b) (JP counterparts) | | X | X | | X | | X | | X | | X | X | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 6,005,613 | Multi-mode Digital Camera with Computer Interface Using Data Packets Combining Image and Mode Data | Endsley, et al. | 9/12/1996 | 12/21/1999 | 102(e) | | X | X | | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | | X | X | | X | | | | | | | | | | | |
| 6,081,856 | Adapter and method for emulating the operation of a peripheral device of a computer | Comer | 12/2/1997 | 6/27/2000 | 102(e) | | X | X | X | X | | X | | X | X | X | X | | | X | | X | X | X | | | X | | X | X | | | | | | | | | | | |
| 6,088,532 (JP 08-191375, JP 08-191410, JP 08-191412, JP 08-242465, JP 08-265524) | Image Signal Reading Operation Control Device | Yamamoto et al. | 12/29/1995 | 7/11/2000 (JP counterparts were published on 7/23/1996, 7/23/1996, 7/23/1996, 9/17/1996, 1011/1996) | 102(b) (JP counterparts) | | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | |
| 6,098,116 | Process control system including a method and apparatus for automatically sensing the connection of devices to a network | Nixon et al. | 4/12/1996 | 8/1/2000 | 102(e) | | X | X | | X | X | X | | X | | X | X | | | X | X | | | | | | X | | | X | | | | | | | | | | | |
| 6,111,604 (JP 08-228321, JP 08-237526, JP 08-298614) | Digital Camera which Detects a Connection to an External Device | Hashimoto et al. | 2/21/1996 | 8/29/2000 (JP counterparts were published on 9/3/1996, 9/13/1996, 11/12/1996, respectively) | 102(b) (JP counterparts) | | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | X | X | X | X | | | | | | | | | | | |
| 6,182,145 | Method and apparatus for parallel port interconnection | Schuman et al. | 1/22/1997 | 1/30/2001 | 102(e) | | X | X | | X | | X | | X | | X | X | | | X | | | | | | | | | | | | | | | | | | | | | |

EXHIBIT A
(U.S. PATENT PRIOR ART)

| (Patent No.) | Title | Inventor or Author | Filing Date for 102(e) purpose | Publication or Issue Date | Category of Prior Art | 399<br>449<br>Code | 1,11,14<br>1,17,18<br>A | 1,14<br>1,18<br>B1 | 11<br>17<br>B2 | 1,11,14<br>1,17,18<br>C | 1,11,14<br>C1 | 1,11<br>1,17<br>D | 5<br>D* | 1,11<br>1,17<br>E | 3<br>16<br>E* | 1,11,14<br>1,17,18<br>F | 1,11,14<br>1,17,18<br>G | 1,11,14<br>G1 | 1,11,14<br>G2 | 1,11<br>1,17<br>H | 1,11<br>H1 | 1,11,14<br>1,17,18<br>I | 1,11,14<br>1,17,18<br>J | 1,11,14<br>K1 | 1,17,18<br>K2 | 15<br>K2* | 1,14<br>L1 | 1,18<br>L2 | 11<br>17<br>L3 | 1,11,14<br>M | N1 | 1<br>17,18<br>N2 | 2,15<br>B*1 | 13<br>B*3 | 7<br>N*1 | 2<br>N*5 | 6<br>N*8 | 7<br>N*9 | 8<br>N*10 | 9<br>N*11 | 12<br>N*14 | 13<br>N*15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6,298,388 | Electronic apparatus and method for discriminating whether a first or second card is attached thereto | Taguchi | 9/16/1994 | 10/2/2001 | 102(e) | | X | X | X | X | | X | X | X | X | X | X | | | X | | X | X | | | | X | | | X | | | | | | | | | | |
| 6,344,875 (JP 08-228321, JP 08-237526, JP 08-298614) | | Hashimoto, et al. | 2/21/1996 4/10/2000† | 2/5/2002 (JP counterparts were published on 9/3/1996, 9/13/1996, 11/12/1996, respectively) | 102(b) (JP counterparts) | | X | X | | X | X | X | | X | X | X | X | X | X | X | | | | | | | | X | X | | X | | | | | | | | | | |
| 7,046,276 (JP 08-228321, JP 08-237526, JP 08-298614) | | Hashimoto, et al. | 2/21/1996 1/6/2002† | 3/16/2006 (JP counterparts were published on 9/3/1996, 9/13/1996, 11/12/1996, respectively) | 102(b) (JP counterparts) | | X | X | | X | X | X | | X | X | X | X | X | X | X | | | | | | | | X | X | | X | | | | | | | | | | |

EXHIBIT A
(OTHER PUBLICATIONS)

| Publication Title | Inventor or Author | Publication or Issue Date M/D/Y | Category of Prior Art | 399<br>449<br>Code | 1,11,14<br>1,17,18<br>A | 1,14<br>1,18<br>B1 | 11<br>17<br>B2 | 1,11,14<br>1,17,18<br>C | 1,11,14<br><br>C1 | 1,11<br>1,17<br>D | 5<br><br>D* | 1,11<br>1,17<br>E | 3<br>16<br>E* | 1,11,14<br>1,17,18<br>F | 1,11,14<br>1,17,18<br>G | 1,11<br><br>G1 | 1,1<br><br>G2 | 1,11<br>1,17<br>H | 1,11<br><br>H1 | 1,11<br>1,17<br>I | 1,11,14<br>1,17,18<br>J | 1,11,14<br><br>K1 | <br>1,17,18<br>K2 | <br>15<br>K2* | 1,14<br><br>L1 | <br>1,18<br>L2 | 11<br>17<br>L3 | 1,11,14<br><br>M | <br>1<br>N1 | <br>17,18<br>N2 | 2,15<br><br>B*1 | 13<br><br>B*3 | 7<br><br>N*1 | <br>2<br>N*5 | <br>6<br>N*8 | <br>7<br>N*9 | <br>8<br>N*10 | <br>9<br>N*11 | <br>12<br>N*14 | <br>13<br>N*15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design and Construction of a Universal Data Acquisition and Control System for Scanning Probe Microscopy | Tasler | May-96 | 102(b) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | | | | X | | X | X | | | | | | | | | | | |
| PC-based Data Acquisition in an Industrial Environment | Steve Martin | 1990 | 102(b) | | X | X | X | X | X | X | | X | X | X | X | X | X | X | | | | | | | | | | | | | | | | | | | | | |
| Data Disasters: What Not To Do | Michael Lang | Dec-93 | 102(b) | | X | X | X | X | | X | | X | | X | X | | | X | X | X | X | X | X | X | X | X | | X | | | X | | | | | | | | |
| Designing Control Units That Interface Peripherals to the IBM I/O Channel | Richard Keele | 1/31/1989 | 102(b) | | X | X | | X | | | | | | X | X | | | X | X | X | X | X | X | | X | X | | X | | | | | | | | | | |
| The SCSI Bus and IDE Interface Book | Friedhelm Schmidt | 6/17/1995 (German version published as early as 1993) | 102(b) | | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | | | X | | X | X | | | | | | | | | | | X |
| "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final | | 6/21/1997 (Draft published in 1996) | 102(b) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | X | | X | | | | X | | | | | | | | |
| "July 1996 Apple article on SCSI drivers" | | 7/3/1996 | 102(b) | | | X | X | X | X | | | | | | | | | | | | | | | | X | | X | | | | X | | X | | | | | | |
| "Derived Virtual Devices: A Secure Distributed File System Mechanism" | | 9/17/1996 | 102(b) | | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | X | X | | | | | | | | | |

EXHIBIT A
(OTHER PUBLICATIONS)

| Publication Title | Inventor or Author | Publication or Issue Date M/D/Y | Category of Prior Art | 399<br>449<br>Code | 1,11,14<br>1,17,18<br>A | 1,14<br>1,18<br>B1 | 11<br>17<br>B2 | 1,11,14<br>1,17,18<br>C | 1,11,14<br><br>C1 | 1,11<br>1,17<br>D | 5<br><br>D* | 1,11<br>1,17<br>E | 3<br>16<br>E* | 1,11,14<br>1,17,18<br>F | 1,11,14<br>1,17,18<br>G | 1,11<br><br>G1 | 1,1<br><br>G2 | 1,11<br>1,17<br>H | 1,11<br><br>H1 | 1,11<br>1,17<br>I | 1,11,14<br>1,17,18<br>J | 1,11,14<br><br>K1 | <br>1,17,18<br>K2 | <br>15<br>K2* | 1,14<br><br>L1 | <br>1,18<br>L2 | 11<br>17<br>L3 | 1,11,14<br><br>M | <br>1<br>N1 | <br>17,18<br>N2 | 2,15<br><br>B*1 | 13<br><br>B*3 | 7<br><br>N*1 | <br>2<br>N*5 | <br>6<br>N*8 | <br>7<br>N*9 | <br>8<br>N*10 | <br>9<br>N*11 | <br>12<br>N*14 | <br>13<br>N*15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design and Construction of a Universal Data Acquisition and Control System for Scanning Probe Microscopy | Tasler | 05/ /96 (more than one year before the '399's effective U.S. filing date, 03/03/98) | 102(b) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | | | | X | | X | X | | | | | | | | | | |
| PC-based Data Acquisition in an Industrial Environment | Steve Martin | 1990 | 102(b) | | X | X | X | X | X | X | | X | X | X | X | X | X | X | | | | | | | | | | | | | | | | | | | | |
| Data Disasters: What Not To Do | Michael Lang | Dec-93 | 102(b) | | X | X | X | X | | X | | X | | X | X | | | X | X | X | X | X | X | X | X | X | | X | | | X | | | | | | | |
| Designing Control Units That Interface Peripherals to the IBM I/O Channel | Richard Keele | 1/31/1989 | 102(b) | | X | X | | X | | | | | | X | X | | | X | X | X | X | X | X | | X | X | | X | | | | | | | | | | |
| The SCSI Bus and IDE Interface Book | Friedhelm Schmidt | 6/17/1995 (German version published as early as 1993 - need to get copy) | 102(b) | | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | | | X | | X | X | | | | | | | | | | X |
| "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final | | 6/21/1997 (A draft of this specification was published in 1996. We are now trying to obtain a copy of the published draft.) | 102(b) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | X | | X | | | | X | | | | | | | |
| "July 1996 Apple article on SCSI drivers" | | 7/3/1996 | 102(b) | | | X | X | X | X | | | | | | | | | | X | | | | | | X | | X | | | | X | | X | | | | | |
| "Derived Virtual Devices: A Secure Distributed File System Mechanism" | | 9/17/1996 | 102(b) | | X | X | | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | X | X | | | | | | | | |

EXHIBIT A
(PRODUCT PRIOR ART)

| | | | 399 | 1,11,14 | 1,14 | 11 | 1,11,14 | 1,11 | 1,11 | 5 | 1,11 | 3 | 1,11,14 | 1,11,14 | 1,11,14 | 1,11,14 | 1,11 | 1,11 | 1,11,14 | 1,11,14 | 1,11,14 | | | 1,14 | | 11 | 1,11,14 | | | 2,15 | 13 | 7 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | On sale or used in | | 449 | 1,17,18 | 1,18 | 17 | 1,17,18 | | 1,17 | | 1,17 | 16 | 1,17,18 | 1,17,18 | | | 1,17 | | 1,17,18 | 1,17,18 | | 1,17,18 | 15 | | 1,18 | 17 | | 1 | 17,18 | | | | 2 | 6 | 7 | 8 | 9 | 12 | 13 |
| Prior Art Reference | the U.S. | Category of Prior Art | Code | A | B1 | B2 | C | C1 | D | D* | E | E* | F | G | G1 | G2 | H | H1 | I | J | K1 | K2 | K2* | L1 | L2 | L3 | M | N1 | N2 | B*1 | B*3 | N*1 | N*5 | N*8 | N*9 | N*10 | N*11 | N*14 | N*15 |
| Casio QV-10 camera | Before 03/04/96 | 102(b), 102(g) | | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | | | | | | | | | | | |
| Kodak DCS200 camera | 1992-93 | 102(b), 102(g) | | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | | | | | | | | | | | |
| Kodak DC25 camera | 1996 | 102(b), 102(g) | | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | | | | | | | | | | | |
| Kodak DCS1, DCS 3, DCS 5. Collectively, the "DCS Cameras" | Jul-95 | 102(b), 102(g) | | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | | | | | | | | | | | |
| Macintosh PowerBook 180 + Quadra | 1992 | 102(b), 102(g) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | X | | | | | | | | | X |
| DASM-AD14 | 1992 | 102(b), 102(g) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | X |
| DeskLab | 1992 | 102(b), 102(g) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | X |
| HP PhotoSmart C5340 | 3/17/1997 | 102(a), 102(g) | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | X | | X | X | X | X | X | | X | | | | X | X | | X |

# Exhibit A1

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | System bus 2, data processing system (see col. 3, lines 20-25) |
| **C** | a data transmit/receive device, | Devices providing analog signals to input channels 0-63 (see col. 2, lines 33-48) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Input channels 0-63 receive analog signals from various data Tx/Rx devices (see col. 2, lines 33-48) |
| **D** | a processor; | Acquisition/conversion control circuit 61 (see col. 3, lines 5-9) |
| **E** | a memory; | Dual-port RAM 25 and data buffer 27 (see col. 3, lines 56-65) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | System bus 2 connects the data processing system to the interface unit (see col. 3, lines 20-25) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Multiplexers 64-67 receive as inputs analog channels 0-63 (see col. 2, lines 34-48) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Sample and hold circuit 57 |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC converter 59 |
| **H** | wherein the interface device is configured by the processor and the memory | |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Data from analog data channels 0-63 is digitized and transferred to the data processing system via system bus 2 (see col. 6, line 54 – col. 7, line 37) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Data from analog data channels 0-63 is digitized and transferred to the data processing system via system bus 2 (see col. 6, line 54 – col. 7, line 37) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Buffers 9, 27 |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 4,901,275 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | Multiplexers 64-67, Channel gain circuit 49 |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A2

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | an emulator 16 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host computer 12 |
| **C** | a data transmit/receive device, | Disk drive/disk 18 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Microprocessor 28 such as Motorola 68010 |
| **E** | a memory; | ROM 20 and RAM 22 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | A first connecting device is inherent but it is not clear whether the tape drive interface 14 is a multi-purpose interface |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | SCSI control 26 functions as a second connecting device |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | No |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | No |
| **H** | wherein the interface device is configured by the processor and the memory | Microprocessor 28 such as Motorola 68010 and ROM 20 and RAM 22 |
| **H1** | to include a first command interpreter and a second command interpreter, | Commands for tape drive are converted to those for disk drive and vice versa |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | The emulator 16 would tell the tape drive interface 14 and the host computer 12 that it is connected to a tape drice. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The hose computer 12 uses the driver for a tape drive |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Inherent |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | RAM 22 |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | Inherent |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | Inherent |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | Inherent |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,297,124 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A3

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Control unit 101 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host processor 11 |
| **C** | a data transmit/receive device, | Control and drive circuits 121 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | a processor 204-0 |
| **E** | a memory; | Cache memory 113 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | A first connecting device is inherent but it is not clear whether there is a multi-purpose interface |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | I/O 120 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | No |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | No |
| **H** | wherein the interface device is configured by the processor and the memory | a processor 204-0 and Cache memory 113 |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Inherent |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | Inherent |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Inherent |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The computer recognizes it as one large disk drive |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | Inherent |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The disk drive array data storage subsystem consists of three abstract layers: virtual, logical and physical. Col. 3, lines 57-65. |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| **N*12** | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,430,855 |
|---|---|---|
| **N*13** | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| **N*14** | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

**PRIOR ART CLAIM CHART**

# Exhibit A4

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | System manager 22. Figs. 1-5. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | EISA server 12. Figs. 1, 4; Col. 2, l. 33 – col. 3, l. 40; Col. 5, ll. 9-16. |
| **C** | a data transmit/receive device, | Remote console 34, which is capable of transmitting and receiving data. Figs. 1, 2, 4, 5; Col. 5, ll. 17-63. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Control processor 68. Fig. 3; Col. 4, ll. 29-47. |
| **E** | a memory; | Random access memory 70, ready only memory 72. Fig. 3; Col. 4, ll. 29-47. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | System manager 22 connects to the EISA server 12 via EISA system board 13. Figs. 1-3; Col. 2, l. 33 – col. 3, l. 40. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Remote console 34 connects to the system manager 22 via an out-of-band asynchronous line 40. Fig. 1; Col. 3, ll. 37-40. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The analog-to-digital converter 98 necessarily contains a sampling circuit. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | System manager 22 contains analog-to-digital converter 98. Fig. 3; Col. 3, l. 64 – col. 4, l. 7. |
| **H** | wherein the interface device is configured by the processor and the memory | |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | The system manager device driver 16 provides two-way communication between system manager 22 and EISA server 12. Col. 2, l. 33 – col. 3, l. 40.<br>Keystrokes inputs on the remote system are sent from remote system to the EISA server and outputs are sent from the EISA server to the remote system without requiring use of software run on the EISA server. Col. 5, ll. 17-63; Col. 7, ll. 7-14. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | Same as above. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Control processor transfer buffer logic 80. Fig. 3; Col. 4, ll. 29-47. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| D* | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| M* | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| N*1 | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| N*2 | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| N*3 | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| N*4 | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| B*2 | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,440,699 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A5

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The '772 Patent discloses a TPFS, an interface between a mass storage peripheral device and a host computer. The TPFS is a "microprocessor based control system which receives file oriented commands from a host and subsequently: (a) issues a suitable sequence of commands to the peripheral; and (b) sends or receives data associated with file oriented commands." 16:1-19. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | The '722 Patent discloses a host computer system which communicates with mass storage peripherals via a SCSI interface. 17:36-55; Figs. 1, 2, 3; 27:40-44. |
| **C** | a data transmit/receive device, | The '772 Patent discloses a data/transmit receive device in the form of a mass storage peripheral. 20:54-67 |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The mass storage peripheral has analog components such as sensors and coverters:<br>"Typically, interpreter 19 is also implemented in firmware, and it oversees the actual conversion between the programmatically (and digitally) conveyed/expressed commands or data and the actual analog signals that eventually inhabit the tangible peripheral mechanism. . . . The mechanism controller 20 is electrically coupled to the actual peripheral mechanism (drive motors, heads, amplifiers, sensors, etc.) and its medium (or media) 21." 19:22-29.<br><br>Additionally, the '772 Patent contemplates a myriad of potential data/transmit receive devices.<br>"The random access mass storage peripheral may be an entirely conventional peripheral, or it may be of a type not yet known." 20:54-58. |
| **D** | a processor; | The interface device of the '772 Patent includes a processor. 21:7-12; Fig. 2. |
| **E** | a memory; | The interface device of the '772 Patent includes a memory. 21:7-12; Fig. 2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | "Interface cable 6 connects an interface 24 to the interface 4 of the host computer system 2; interface 24 is thus referred to as the host side interface of TPFS machine 23 . . . As with the case for FIG. 1, these various interfaces may be of any suitable type, with SCSI and IEEE 488 being at the present time the most prominent examples." 20:39-53. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | "In like fashion interface cable 26 connects an interface 25 to an interface 28 of the random access mass storage peripheral 27; interface 25 is thus referred to as the peripheral side interface. As with the case for FIG. 1, these various interfaces may be of any suitable type, with SCSI and IEEE 488 being at the present time the most prominent examples." 20:39-53. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The '772 patent inherently includes a sampling circuit for sampling the signals from the sensors in the mass storage perpherial. 19:16-29. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | The interface device of the '772 Paetnt includes an analog to digital converter for converting "between the programatically (and digitally) conveyed/expressed commands or data and the actual analog signals" in the peripheral mechanism, such as sensors. 19:16-29. |
| **H** | wherein the interface device is configured by the processor and the memory | The CPU configures itself for communicating between the host and mass storage peripheral by executing code stored in its memory. 21:7-19; 19:2-17; 19; 30-33. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **H1** | to include a first command interpreter and a second command interpreter, | The interface device of the '772 Patent includes interpreters for communicating with the host, on the one hand, and the mass storage peripheral on the other hand. 18:47-19:16; 29:15-30:5; Appendix A, B, C. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The interface device acts as a virtual file system (VFS) such as that found in a storage device regardless of what peripheral device is attached. 16:1-27. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | The TPFS communicates using a general purpose generic file operation description language over a SCSI interface. 18:47-58. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The host device communicates with the TPFS using a general purpose generic file operation language. 18:47-58; Appendix A, B, C. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The TPFS receives read commands, translates them into its own internal data structure, gathers the data, and returns it to the host. 27:62-28:26; Appendix A, B, C. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The '772 Patent includes a host with a SCSI interface and driver. It also contains the standard VFS file system using a general purpose, generic file operation description language. 18:47-58; Appendix A. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 1, row L1 |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | The TPFS includes common storage system drives. *E.g.* Appendix D, E. The TPFS emulates a VFS. 19:66-20:2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The TPFS includes memory. See e.g. Fig, 1, item 16; Fig. 2, item 31; Fig. 3, item 70. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | The host device communicates with the TPFS via a SCSI interface.17:42-47; 20:39-48. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | "The TPFS (transparent peripheral file system) thus makes the the peripheral appear to the host as if it contains its own file system . . . ." 16:11-19; 23:34-24:17; *see also* Appendix A, B, C. |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | The '772 Patent discloses a peripheral file system adapter that communicates with the TPFS via SCSI. 16:19-26. |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | The drivers in the '772 patent are for mass storage devices including hard drives. *E.g.* Appendix D, E. Additionally, the host uses a VFS, a standard file system. 16:19-27. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The interface device acts as a peripheral file system such as that found in a storage device regardless of what peripheral device is attached. 16:1-27. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The host communicates with the interface device using VFS and SCSI drivers. 18:47-58; Appendix A, B. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | "First, TPFS 17 is itself a virtual file system in its own right . . . ." 19:66-67. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | "First, TPFS 17 is itself a virtual file system in its own right . . . ." 19:66-67; see also 21:27-24:25; 32:25-61. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | The file system includes a collection of drivers, which consist of executable code for converting vfs commands and associated streams of data into sequences of peripheral-specific commands and for formatting data coming from the peripheral. 21:7-19; 19:2-23; Appendix B, C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | In response to a request from the host, the TPFS retrieves the contents of the first record. Appendix D. |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | Appendix D, *e.g.* p. 180-83, 187-88, 192-93. |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | Appendix D, *e.g.* p. 1-31; 49-53, 187-188; Appendix A, B. |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | Appendix D, p. 1-31; 49-53, 187-88; Appendix A, B. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **N*12** | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| **N*13** | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| **N*14** | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | The TPFS formats data from the host into an appropriate size for the peripheral device and vise versa. *E.g.* 19:2-15. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent 5,463,772 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | The drivers of the TPFS are functionally coupled with a peripheral command interpreter that converts between host commands and commands for controlling drive motors, heads, amplifiers, sensors, etc. 19:16-29. |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The peripheral device may include a hard disk. 20:54-60. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A6

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,479,206 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Electronic camera 10 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host computer 30 |
| **C** | a data transmit/receive device, | Imaging optical system including zoom-lens mechanism 11, diaphragm 12, CCD 13 and signal processing circuit 14 (see col. 11, lines 59-67) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | RGB signal output from signal processing circuit 14 is an analog signal |
| **D** | a processor; | Control unit 18 includes a CPU (see col. 11, lines 56-58) |
| **E** | a memory; | Image memory 16 and main memory 17 (see col. 12, line 59 – col. 13, line 5) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Communication interface 9 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | ADC 15 interfaces with the imaging optical system |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | It is inherent to sample the data in the process of converting the data from analog to digital |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC 15 |
| **H** | wherein the interface device is configured by the processor and the memory | Control unit 18 operates in accordance with the camera control parameters stored in the camera control-parameter memory 17B (see col. 12, lines 65-67) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,479,206 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Transfer buffer 17A temporarily stores image data before it is transmitted to the host computer 30 via communication interface 9 and communication interface 33 (see col. 12, lines 63-65 and col. 13, lines 18-20) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,479,206 |
|---|---|---|
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Transfer buffer 17A temporarily stores image data before it is transmitted to the host computer 30 via communication interface 9 and communication interface 33 (see col. 12, lines 63-65 and col. 13, lines 18-20) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,479,206 |
|---|---|---|
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Transfer buffer 17A temporarily stores image data before it is transmitted to the host computer 30 via communication interface 9 and communication interface 33 (see col. 12, lines 63-65 and col. 13, lines 18-20) |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,479,206 |
|---|---|---|
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,479,206 |
|---|---|---|
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 479,206 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 479,206 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 479,206 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 479,206 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 479,206 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 479,206 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A7

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,493,335 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Electronic camera |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host computer 18 |
| **C** | a data transmit/receive device, | Input section 10 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Input section 10 includes a lens 20, a filter 26, and CCD 28, which generates an analog image signal (see col. 3, line 59 – col. 4, line 13) |
| **D** | a processor; | MPU 82 |
| **E** | a memory; | Frame buffer memory 62, EPROM memory 66 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Docking unit 16 including a SCSI controller 76 (see col. 4, lines 42-45) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Storage section 12 for processing and storing images captured by input section 10 (see col. 3, lines 29-31) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Correlated double sampling circuit 56 |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC 58 |
| **H** | wherein the interface device is configured by the processor and the memory | MPU 82 controls the operation of the of the camera (see col. 4, lines 45-58) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,493,335 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Image data is sent to the computer 18 from EPROM 66 via serial port 68, UART 70 and an RS232 driver or through connectors 74a and 74b via SCSI controller 76 to a parallel port 78 (see col. 4, lines 37-45) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,493,335 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Image data is sent to the computer 18 from EPROM 66 via serial port 68, UART 70 and an RS232 driver or through connectors 74a and 74b via SCSI controller 76 to a parallel port 78 (see col. 4, lines 37-45) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,493,335 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | SCSI controller 76 |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | DSP 64 |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,493,335 |
|---|---|---|
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,493,335 |
|---|---|---|
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 493,335 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 493,335 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 493,335 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 493,335 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 493,335 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 493,335 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A8

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | A target system 14 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | An initiator system 10 |
| **C** | a data transmit/receive device, | Magnetic disk 16 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Inherent. The target system 14 can be a PC which has a processor. |
| **E** | a memory; | Inherent. The target system 14 can be a PC which has a memory. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The target system 14 is connected with the initiator system via its SCSI bus. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The target system 10 is connected to the magnetic disk 16 via SCSI adapter. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | No. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | No. |
| **H** | wherein the interface device is configured by the processor and the memory | The target system 14 is configured by its processor and memory. |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | Inherent in SCSI interface |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Inherent |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | The initiator system deem the target system as a local hard disk. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | SCSI driver |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Inherent |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | If the SCSI interface needs a specific driver. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | If the SCSI interface needs a specific driver. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | SCSI driver |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Target system has a buffer memory. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | SCSI interface |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | Inherent |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | Possible |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | SCSI drivers |
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | It was recognized as a hard disk |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | SCSI driver |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| **N*12** | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,499,378 |
|---|---|---|
| **N*13** | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| **N*14** | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The initiator system considers the target system as a hard disk. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

**PRIOR ART CLAIM CHART**

# Exhibit A9

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | A portion of an image handling apparatus such as a scanner, includes an interface device. Figs. 1, 3. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Workstation 21 |
| **C** | a data transmit/receive device, | A portion of the image scanner 20 includes the CCD 31. Figs. 2, 3; col. 3, line 2-37. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The CCD 31 reads the reflected light, converts it to the electric signal, and outputs an analog image signal. Figs. 2, 3; col. 3, line 2-37. |
| **D** | a processor; | CPU 50 |
| **E** | a memory; | RAM; non-volatile memory 63 and image memory 62 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Scanner 20 connects to workstation 21 via the SCSI controller 64 and SCSI bus 22. Figs. 1, 3; col. 2, line 61 – col. 3, line 1; col. 4, lines 11-15; col. 7, lines 34-38. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Circuits including CCD 31, AMP 33 and A/D 34. Fig. 3; col. 3, lines 24-38. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | A sampling circuit is inherent in A/D 34. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | A/D 34 |
| **H** | wherein the interface device is configured by the processor and the memory | CPU 50; SCSI controller 64<br>RAM; non-volatile memory 63 and image memory 62 |
| **H1** | to include a first command interpreter and a second command interpreter, | A portion of CPU 50; SCSI controller 64 and memory forms a first command interpreter and a second command interpreter. Figs. 3, 6; col. 3, line 51 – col. 4, line 24; col. 6, line 1- col. 7, line 50. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The image scanner 20 emulates the file system of the "UNIX" as if it were a hard disc. Accordingly, the image scanner 20 looks like the hard disc from the workstation 21 and can be handled as the hard disc. Abstract; Figs. 3, 6; col. 3, line 51 - col. 4, line 24; col. 6, line 1 - col. 7, line 50, col. 8, line 15-18; col. 9, lines 10-14; claims 1, 3. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The control of the apparatus or the transfer of image data can be carried out using the device driver for existing hard discs. Col. 2, lines 8-13; col. 4, lines 20-24; col. 8, line 15-18; col. 9, lines 10-14. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The SCSI controller 64 is adapted to receive data request commands from workstation 21. The command is interpreted as being a command to initiate a transfer of data to workstation 21. Col. 2, lines 8-18; col. 4, line 11 - col. 7, line 50. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | If the SCSI interface needs a specific driver. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | The image scanner 20 emulates the file system of the "UNIX" as if it were a hard disc. Accordingly, the image scanner 20 looks like the hard disc from the workstation 21 and can be handled as the hard disc. Abstract; Figs. 3, 6; col. 3, line 51 - col. 4, line 24; col. 6, line 1 - col. 7, line 50, col. 8, line 15-18; col. 9, lines 10-14; claims 1, 3. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Non-volatile memory 63 and image memory 62. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | SCSI control 64 |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | The image scanner 20 emulates the file system of the "UNIX" as if it were a hard disc. Accordingly, the image scanner 20 looks like the hard disc from the workstation 21 and can be handled as the hard disc. Abstract; Figs. 3, 6; col. 3, line 51 - col. 4, line 24; col. 6, line 1 - col. 7, line 50, col. 8, line 15-18; col. 9, lines 10-14; claims 1, 3. |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | Possible |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | The control of the apparatus or the transfer of image data can be carried out using the device driver for existing hard discs. Col. 2, lines 8-13; col. 4, lines 20-24; col. 8, line 15-18; col. 9, lines 10-14. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The image scanner 20 emulates the file system of the "UNIX" as if it were a hard disc. Accordingly, the image scanner 20 looks like the hard disc from the workstation 21 and can be handled as the hard disc. Abstract; Figs. 3, 6; col. 3, line 51 - col. 4, line 24; col. 6, line 1 - col. 7, line 50, col. 8, line 15-18; col. 9, lines 10-14; claims 1, 3. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | Same as above. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | Same as above. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | Inherent. The image scanner 20 emulates the file system of the "UNIX" as if it were a hard disc. Accordingly, the image scanner 20 looks like the hard disc from the workstation 21 and can be handled as the hard disc. Abstract; Figs. 3, 6; col. 3, line 51 - col. 4, line 24; col. 6, line 1 - col. 7, line 50, col. 8, line 15-18; col. 9, lines 10-14; claims 1, 3. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,506,692 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The image scanner 20 emulates the file system of the "UNIX" as if it were a hard disc. Accordingly, the image scanner 20 looks like the hard disc from the workstation 21 and can be handled as the hard disc. Abstract; Figs. 3, 6; col. 3, line 51 - col. 4, line 24; col. 6, line 1 - col. 7, line 50, col. 8, line 15-18; col. 9, lines 10-14; claims 1, 3. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A10

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,508,821 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Image scanner 20 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Workstation 21 |
| **C** | a data transmit/receive device, | Imaging section of image scanner 20 including scanning unit 6, lens 10 and CCD image sensor 31 (see col. 3, lines 9-28 and Fig. 3) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | CCD image sensor 31 outputs an analog image signal 32 (see col. 3, lines 25-28 and Fig. 3) |
| **D** | a processor; | CPU 50 (see Fig. 3) |
| **E** | a memory; | Image memory 62, Non-volatile memory 63 (see col. 4, lines 3-12 and Fig. 3) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | SCSI controller 64 (see col. 4, lines 13-15 and Fig. 3) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Electronics in image scanner 20 that receive and digitize the analog image signal 32 from CCD image sensor 31 (see col. 3, lines 25-38 and Fig. 3) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | It is inherent to sample the data in the process of converting the data from analog to digital |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC 34 (see col. 3, lines 25-38 and Fig. 3) |
| **H** | wherein the interface device is configured by the processor and the memory | CPU 50 operates in accordance with the information in non-volatile memory 63 (see col. 6, line 26 – col. 7, line 55) |
| **H1** | to include a first command interpreter and a second command interpreter, | Image scanner 20 emulates a hard disk drive and transfers image data to the workstation 21 (see col. 4, lines 25-35 and col. 5, lines 43-63) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,508,821 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | Image scanner 20 inherently sends a signal to workstation 21 to identify itself in response to an inquiry from the workstation 21 (see col. 4, lines 25-50) |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Image scanner 20 has file system emulation means that enable the image scanner to appear to the workstation 21 as a hard disk (see col. 2, lines 5-25 and col. 4, lines 25-55) |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Image scanner 20 has file system emulation means that enable the image scanner to appear to the workstation 21 as a hard disk (see col. 2, lines 5-25 and col. 4, lines 25-55) |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | Workstation 21 uses a standard hard disk device driver to communicate with the image scanner 20 (see col. 2, lines 5-25 and col. 4, lines 25-55) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The image scanner 20 provides the image data files to the workstation 21 in response to a request from the workstation 21 (see col. 5, lines 43-63) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,508,821 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The image scanner 20 provides the image data files to the workstation 21 in response to a request from the workstation 21 (see col. 5, lines 43-63) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,508,821 |
|---|---|---|
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | Workstation 21 uses a standard hard disk device driver to communicate with the image scanner 20 (see col. 2, lines 5-25 and col. 4, lines 25-55)<br>Image scanner 20 inherently identifies itself as a hard disk to enable the workstation to select the hard disk device driver to communicate with the image scanner 20 |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,508,821 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | SCSI controller 64<br>Workstation 21 inherently includes a SCSI interface to be able to communicate with the SCSI controller 64 of the image scanner 20 |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The functions of the gamma transfer circuit 36, zooming circuit 38, and trimming circuit 40 are equivalent to a digital signal processor (see col. 3, lines 29-50) |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | CPU 50 creates a root directory and i-node data of the image file to allow the workstation 21 to access the image file (see col. 5, lines 43-63 and col. 6, line 26 – col. 7, line 53) |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,508,821 |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | To operate a SCSI interface properly, the workstation 21 inherently includes an ASPI manager |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | Workstation 21 uses a standard hard disk device driver to communicate with the image scanner 20 (see col. 2, lines 5-25 and col. 4, lines 25-55) |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 508,821 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | Image scanner 20 has file system emulation means that enable the image scanner to appear to the workstation 21 as a hard disk (see col. 2, lines 5-25 and col. 4, lines 25-55) |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | Workstation 21 uses a standard hard disk device driver to communicate with the image scanner 20 (see col. 2, lines 5-25 and col. 4, lines 25-55) |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | Image scanner 20 emulates a file system understood by the workstation 21, the file system including a root directly and i-node data (see col. 5, lines 43-63 and col. 6, line 26 – col. 7, line 53) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 508,821 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | Image scanner 20 emulates a file system understood by the workstation 21, the file system including a root directly and i-node data (see col. 5, lines 43-63 and col. 6, line 26 – col. 7, line 53) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 508,821 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | CPU 50 inherently uses an executable or batch file for conducting a routine to create the root directory and i-node data (see col. 5, lines 43-63 and col. 6, line 26 – col. 7, line 53) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 508,821 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | CPU 50 arranges for the root direct, i-node data, and the image file to be transferred to the workstation 21 (see col. 7, lines 31-37) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 508,821 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 508,821 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | Image scanner 20 has file system emulation means that enable the image scanner to appear to the workstation 21 as a hard disk (see col. 2, lines 5-25 and col. 4, lines 25-55) |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A11

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,724,155 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Camera 20 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host 104 |
| **C** | a data transmit/receive device, | Image pick-up circuit 2 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Image pick-up circuit 2 includes a CCD that generates analog image data (col. 4, lines 55-60) |
| **D** | a processor; | System controller 12 (col. 4, lines 34-36) |
| **E** | a memory; | EEPROM 16, frame memory 4, Memory card 17 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | RS-232C interface 15 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | ADC 3 receives the analog image data from image pick-up circuit 2 (see Fig. 4) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Inherent in the camera 20 for processing the analog signal generated by the CCD of the image pick-up circuit 2 |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC 3 |
| **H** | wherein the interface device is configured by the processor and the memory | System controller 12 operates in accordance with the protocols stored in EEPROM 16 (see col. 5, lines 19-27) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,724,155 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images are transferred from the camera 20 to the host 104 (see col. 8, line 52 – col. 9, line 38 and Figs. 16-19) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,724,155 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images are transferred from the camera 20 to the host 104 (see col. 8, line 52 – col. 9, line 38 and Figs. 16-19) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,724,155 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | SCSI interface 23 (see col. 11, lines 61-65 and Fig. 27) |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,724,155 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 724,155 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 724,155 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 724,155 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 724,155 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 724,155 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 724,155 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A12

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Scanner cartridge 166. Figs. 3, 4. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | PC 190 and host interface board 188. Figs. 3, 4. The host interface board 188 is a multi-purpose interface. Col. 5, ll. 1-14, 36-52. |
| **C** | a data transmit/receive device, | Scanner 126 receives and transmits data via cable 152. Figs. 2, 3; Col. 4, ll. 9-13; Col.<br>CCD 184 is a data transmit/receive device. Fig. 3; Col. 4, ll. 50-54. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | CCD in scanner 126 produces an analog output signal. Fig. 3; Col. 4, ll. 4-14, 45-65. |
| **D** | a processor; | Scanner cartridge 166 contains microprocessor 168. Fig. 3; Col. 4, ll. 32-44; Col. 5, ll. 36-52. |
| **E** | a memory; | Scanner cartridge 166 contains RAM 172 and ROM 170. Fig. 3; Col. 4, ll. 32-44. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Scanner control lines 195 and scanner data bus 194 connects scanner cartridge 166 to the host interface board 188. Fig. 3; ol. 5, l. 14; Col. 5, ll. 36-52.<br>The scanner control lines 195 encode a standard bus arbitration protocol to coordinate transfer with the PC. Col. 5, ll. 22-35. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Cable 152 connects scanner 126 to scanner cartridge 166. Figs. 2, 3; Col. 4, ll. 9-14.<br>Signal line 156 connects CCD 184 to analog-to-digital converter. Fig. 3, Col. 4, ll. 50-57. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Analog-to-digital converter 186, and/or RGB clock generator 180 necessarily contain a sampling circuit. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Analog-to-digital converter 186. Fig. 3; Col. 4, ll. 4-14, 45-65; Col. 5, ll. 35-52. |
| **H** | wherein the interface device is configured by the processor and the memory | The scanner cartridge contains general purpose microprocessor 168, ROM 170, and RAM 172, which provide computing and control capability. Fig. 3; Col. 4, ll. 32-44; Col. 5, ll. 36-52. |
| **H1** | to include a first command interpreter and a second command interpreter, | The scanner cartridge 166 contains logic that forms a first and a second command interpreter. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The host interface board 188 includes the necessary logic and buffers to allow the scanner cartridge 166 to communicate with the PC. The host interface board 188 receives a request to transfer data from the DMA controller 176 over scanner control lines 195 and translates the request to a format required by the PC control lines 193. The host interface board 188 selectively enables the digital data on a scanner data bus 194 to be transferred to the PC data bus 196 upon the receipt of an acknowledgement from the PC. The DMA controller 176 generates the transfer of the digital data from the scanner cartridge to the PC. The DMA controller 176 handshakes the digital data over the scanner data bus 194 by use of scanner control lines 193. The scanner control lines 195 encode a standard bus arbitration protocol to coordinate the transfer with the PC CPU. Col. 4, l. 66 – col. 5, l. 52. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The scanning sequence is operable under the control of a scanner driver operating on the PC 190. Col. 4, l. 66 – col. 5, l. 52. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The PC issues a command to the printer to commence scanning. The scanner then captures the image data which is transferred to the PC. Col. 4, l. 66 – col. 5, l. 52. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The data formatter 178 in the scanner cartridge buffers the data in order to transfer multiple bytes of data to the PC. Col. 4, l. 45 – col. 5, l. 35. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | The data formatter 178 formats the digital image into a format expected by the PC. Col. 4, ll. 45-65. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,532,825 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A13

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,539,535 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Imaging and recording apparatus |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | PC (see Fig. 12B) |
| **C** | a data transmit/receive device, | Imaging device 1 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Imaging device 1 generates an analog image information signal (see col. 7, lines 52-56) |
| **D** | a processor; | Timing generation circuits 3 and 7 |
| **E** | a memory; | Semiconductor memories 12 and 13 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Connector 14 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Camera signal processing circuit 17 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Camera signal processing circuit 17 includes a correlation double sampling circuit (see col. 7, lines 56-62) |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Camera signal processing circuit 17 includes an ADC (see col. 7, lines 56-62) |
| **H** | wherein the interface device is configured by the processor and the memory | |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,539,535 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Data is read from memory 13 to the external device 25, which can be a PC (see col. 14, lines 43-52 and col. 27, lines 57-62) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,539,535 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Data is read from memory 13 to the external device 25, which can be a PC (see col. 14, lines 43-52 and col. 27, lines 57-62) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,539,535 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,539,535 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 539,535 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 539,535 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 539,535 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 539,535 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 539,535 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 539,535 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A14

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,548,782 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Apparatus 20A |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host CPU 44 |
| **C** | a data transmit/receive device, | Peripheral device 28 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Controller 39 |
| **E** | a memory; | Configuration registers 26, Buffer 38 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Controller interface 40 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Connector interface 29 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | Controller 39 includes the logic for performing the operations of the apparatus 20A (see col. 4, lines 3-7) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Peripheral identification signals identify the type of peripheral connected to connector 25, such as a parallel port, a floppy or a SCSI device (see col. 4, lines 30-55 and col. 6, lines 33-45) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,548,782 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The host computer 24 communicates with the peripheral device using the applicable software driver (see col. 4, lines 15-20 and col. 6, line 66 – col. 7, line 3) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Host computer 24 inherently receives data from the peripheral device 28 via apparatus 20A (see Fig. 1) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,548,782 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Host computer 24 inherently receives data from the peripheral device 28 via apparatus 20A (see Fig. 1) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,548,782 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,548,782 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 548,782 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 548,782 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 548,782 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 548,782 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 548,782 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 548,782 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A15

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Configurable interface 300, including configurations 400, 500, 600, and 700. Figs. 1-8. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Processor 200. Figs. 1, 2; Col. 2, ll. 49-63; Col. 3, ll. 5-18. |
| **C** | a data transmit/receive device, | Camera 110. Fig. 1; Col. 2, l. 56 – col. 3, l. 4. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Images of objects are acquired by camera 110 in the form of analog signals. Fig. 1; Col. 2, l. 56 – col. 3, l. 4; Col. 3, l. 19-27. |
| **D** | a processor; | The configurable interface includes a DMA controller 330. Figs. 3, 4, 5, 6, 7; Col. 4, ll. 21-28, 43-56. |
| **E** | a memory; | The configurable interface includes a field programmable gate array ("FPGA"), which includes a memory. Col. 3, ll. 55-62.<br>The configurable interface includes buffers, which necessarily include memory. Figs. 3-8; Col. 5, l. 27 - col. 6, l. 15. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Processor 200 connects to the configurable interface via connecting line 201 and a standard bus interface 825. Figs. 1, 3-8; Col. 4, ll. 22-28; Col. 6, ll. 13-15. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Line 111 connects camera 110 and the configurable interface. Figs. 1, 3-8; Col. 4, ll. 11-21. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The analog-to-digital converter necessarily contains a sampling circuit. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Analog signals acquired by camera 110 are converted to digital signals. Fig. 1; Col. 2, ll. 56-63. |

Deleted: 0

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **H** | wherein the interface device is configured by the processor and the memory | The configurable interfaces uses an FPGA which receives input signals encoded according to an input format compatible with the camera. The FPGA produces output digital signals according to an output format compatible with the processor 200. Using direct memory access, the output signals are stored in the memory of processor 200 without substantial attention of the processor 200. Figs. 2-8; Col. 3, l. 55 – col. 4, l. 56; Col. 6, ll. 8-54. |
| **H1** | to include a first command interpreter and a second command interpreter, | Same as above. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The configurable interface includes buffers, such as buffers 321-322, 521-524, 721-724. Figs. 3-8; Col. 4, ll. 28-42; Col. 5, l. 27 - col. 6, l. 15. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,692,159 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A16

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,754,227 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Camera 30 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Computer 33, 34 |
| **C** | a data transmit/receive device, | Imaging photographing element 9 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Imaging photographing element 9 includes a CCD generates an analog image signal |
| **D** | a processor; | CPU 23 including microprocessor 50 (see col. 5, lines 49-50 and col. 6, lines 38-67 and Fig. 7) |
| **E** | a memory; | Control program storing area 51 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | I/O card 15 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | CDS 10 and ADC 4 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | CDS 10 |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC 4 |
| **H** | wherein the interface device is configured by the processor and the memory | Microprocessor 50 operates in accordance with the routines stored in control program storing area 51 (see col. 6, lines 38-52) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,754,227 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images can be transmitted from camera 30 to computer 33 or computer 34 via I/O card 15 (see col. 3, lines 10-15 and col. 4, lines 1-33) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,754,227 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images can be transmitted from camera 30 to computer 33 or computer 34 via I/O card 15 (see col. 3, lines 10-15 and col. 4, lines 1-33) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,754,227 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | Card interface circuit 14 can be a SCSI interface (see col. 5, lines 39-48) |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | DSP circuit 11 |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,754,227 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 754,227 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 754,227 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 754,227 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 754,227 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 754,227 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 754,227 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A17

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | A mass memory card 10 designed for communications between a computer and the exterior (such as fax or modem). See abstract, col. 3, lines 18-20 and FIGs. 1 and 2. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | A microcomputer having a PCMCIA standard interface. See col. 3, lines 9-11. |
| **C** | a data transmit/receive device, | A fax or a model (modem). See abstract. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | It is inherent that a fax contains a CCD that scans the documents and provides analog data input. |
| **D** | a processor; | Microprocessor MP in FIG. 2 |
| **E** | a memory; | Memories R, MV, and MNV in FIG. 2 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Connector CNC of the mass memory card is plugged into the complementary connector CNP of the microcomputer via a PCMCIA standard. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | It is inherent that a fax contains sampling circuit and a A/D converter that converts the analog data provided by the CCD into digital data. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Same as above. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Same as above. |
| **H** | wherein the interface device is configured by the processor and the memory | Microprocessor MP in FIG. 2.<br>Memories R, MV, and MNV in FIG. 2. The volatile memory MV can store instructions that can be interpreted by the microprocessor MP to read and write data. See col. 4, lines 57-63. |
| **H1** | to include a first command interpreter and a second command interpreter, | Thus, the memory card 10 inherently contains the first and second command interpreters to interpret the instructions stored in volatile memory MV. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The memory card 10 behaves like a magnetic disk or a hard disk if seen from the computer. See col. 3, lines 66-col. 4, lines 3. The memory card 10 contains an identification file ID by which the computer can know the type of card to which it is connected. See col. 4, lines 17-19. Therefore, the memory card 10 inherently contains a first command interpreter such that, when it receives an inquiry from the computer as to a type of a device attached to the PCMCIA interface, |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Regardless of the type of the data transmit/receive device (fax or modem) attached to the memory card, the first command interpreter retrieves the ID file and sends it to the computer. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Because the memory card 10 behaves like a magnetic disk or a hard disk if seen from the computer, it is inherent that the ID file tells the computer that it is a flexible magnetic disk or a hard disk, which is an input/output device customary in a computer. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | Because the memory card 10 behaves like a magnetic disk or a hard disk if seen from the computer, it is inherent that the computer communicates with the memory card by means of a magnetic disk driver. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Because the memory card 10 behaves like a magnetic disk or a hard disk if seen from the computer, it is inherent that the memory card contains a second command interpreter that interpret the computer's "read command" to a hard disk as a command to transfer data from the memory card to the computer. See col. 5, lines 15-18, 45-56; col. 5, line 65-col. 6, line 2. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | A microcomputer having a PCMCIA standard interface and inherently a driver for that interface. See col. 3, lines 9-11. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | Because the memory card 10 behaves like a magnetic disk or a hard disk if seen from the computer, it is inherent that the computer uses a hard disk driver to communicate with the memory card 10, and the memory card 10 signals to the computer that it is communicating with a hard disk. See col. 3, lines 66-col. 4, lines 3. |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Data to be read by the computer are first transferred to the volatile memory of the memory card. See col. 5, lines 16-17, 50-57. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | The memory card 10 comprises a root directory (a DIR file) and virtual files that can be accessed by the computer. See col. 4, lines 4-36. |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | See '399 claim 2, row B*1. |
| **A** | **[Start of '449 Patent Claims]**<br>**Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '399 claim 1, row K1. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | See '399 claim 1, row L1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The non-volatile memory (MNV) contains a structure of organization of files exactly as if "this electronic card were nothing but a flexible magnetic disk or a hard disk." (col. 4, lines 1-3). The data relating to the organization of memory includes a root directory. (col. 4, lines 24-29). |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | The non-volatile memory (MNV) contains a structure of organization of files exactly as if "this electronic card were nothing but a flexible magnetic disk or a hard disk." (col. 4, lines 1-3). The data relating to the organization of memory includes a root directory. |
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | The memory card 10 comprises a BIO file for setting and controlling functions of the interface device and a start-up file (AUTOEXEC.BAT) for conducting a routine stored in the memory. See col.4, lines 30-36. |
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | The memory card 10 comprises a BIO file for setting and controlling functions of the interface device and a start-up file (AUTOEXEC.BAT) for conducting a routine stored in the memory. See col.4, lines 30-36. |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | The memory card 10 comprises a BOOT file which inherently simulates the BOOT file of a hard disk (including a starting position and a length of a file allocation table, an indication of a type of the memory card 10 or a number of sectors of the memory card 10.) See col.4, lines 4-11, 19. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | The memory card 10 comprises a FAT file which inherently simulates the FAT file of a hard disk(in response to a request from the computer to display a directory of the memory card 10, a processor is arranged for transferring the file allocation table and the directory structure to the computer) See col.4, lines 4-11, 20-23. |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | Because the memory card 10 simulates a hard disk, the FAT file and the directory structure are transferred to the computer in response to a request from the computer to read data from or store data to the memory card, just like a hard disk. See col.4, lines 4-43. |
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No.5,802,325 |
|---|---|---|
| **N*14** | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | The memory card 10 contains flash memory MNV and MV. See col.3, lines 30-34. It is inherent that in flash memory, data are arranged in blocks having a predetermined size. |
| | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | See '399 claim 1, row K1. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A18

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The digital still camera includes an interface device. Figs. 56, 67, 75, 83. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Personal computer (see col. 1, lines 8-12).<br>The digital still camera can be connected to the personal computer by a serial interface. Figs. 56, 67, 75, 83; col. 30, lines 1-3; col. 33, lines 61-65. |
| **C** | a data transmit/receive device, | Imaging section of digital camera. Figs. 22, 34, 56, 67, 75, 83; col. 20, line 62 – col. 21, line 3; col. 25, lines 30-52; col. 29, lines 22-27; col. 36, lines 15-34. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Imaging section of digital camera provides analog data. Figs. 22, 34, 56, 67, 75, 83; col. 20, line 62 – col. 21, line 3; col. 25, lines 30-52; col. 29, lines 22-27; col. 36, lines 15-34. |
| **D** | a processor; | System controller 39, 49, 72, 99, communication control 80, 105. Figs. 22, 34, 56, 67, 75, 83. |
| **E** | a memory; | RAM 66, 78, 93, Memory card 31, 53, 71, 98. Figs. 22, 34, 56, 67, 75, 83. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Serial interface 81, 106, communication control 80, 105. Figs. 56, 67, 75, 83; col. 29, line 65 – col. 30, line 3; col. 33, lines 59-65. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | ADC 24, 43, 64, 91, CCD 62, pick-up 22, 42, 63, clamp 23, Figs. 22, 34, 56, 67, 75, 83; col. 20, line 62 – col. 21, line 3; col. 25, lines 30-52; col. 29, lines 22-27; col. 36, lines 15-34. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Sampling is inherent as part of the process of converting the analog image input signal into a digital signal with the ADC 24, 43, 64, 91. Additionally, CCD 62, pick-up processor 22, 42, 63, and/or clamp 23 may perform sampling. Figs. 22, 34, 56, 67, 75, 83; col. 20, line 62 – col. 21, line 3; col. 25, lines 30-52; col. 29, lines 22-27; col. 36, lines 15-34. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC 24, 43, 64, 91 converts an image input signal into a digital signal. Figs. 22, 34, 56, 67, 75, 83; col. 20, line 62 – col. 21, line 3; col. 25, lines 30-52; col. 29, lines 22-27; col. 36, lines 15-34. |
| **H** | wherein the interface device is configured by the processor and the memory | The coding control 73, 100 and system control 72, 99 are configured by the processor and memory. Figs. 56, 67, 75, 83; col. 29, line 27 – col. 30, line 3; col. 33, line 26-65. |
| **H1** | to include a first command interpreter and a second command interpreter, | Same as above. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The serial interface 81, 106 is adapted to receive inquiry signals sent by the PC. The system control 72, 99 sends a signal to the serial port that identifies that a FAT file system, which is customary in a PC, is attached the serial port. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The instruction set stored in the processor and memory is adapted to utilize a FAT file system serial driver associated with the PC to communicate with the PC. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The serial interface 81, 106 is adapted to receive data requests commands from the PC. The data request command is interpreted as being a command to initiate a transfer of digital data to the PC. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The PC contains a serial interface which interfaces with serial interface 81, 106 on the digital camera. Figs. 56, 67, 75, 83; col. 29, line 65 – col. 30, line 3; col. 33, lines 59-65. The PC has drivers for the serial interface. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The PC's serial interface drivers communicate with the digital camera. Figs. 56, 67, 75, 83; col. 29, line 65 – col. 30, line 3; col. 33, lines 59-65. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | The serial interface 81, 106 is adapted to receive inquiry signals sent by the PC. The system control 72, 99 sends a signal to the serial port that identifies that a FAT file system is attached the serial port. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Buffers 9, 27 |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | Images are stored as files organized by a directory or subdirectory supported by DOS, making it possible to store the image data in a hierarchical structure. Figs. 4-7; col. 7, lines 47-55; col. 14, line 53 – col. 16, line 15. |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The serial interface 81, 106 is adapted to receive inquiry signals sent by the PC. The system control 72, 99 sends a signal to the serial port that identifies that a FAT file system is attached the serial port. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The instruction set stored in the processor and memory is adapted to utilize a FAT file system serial driver associated with the PC to communicate with the PC. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The instruction set stored in the processor and memory is adapted to utilize a FAT file system serial driver associated with the PC to communicate with the PC. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. Images are stored as files organized by a directory or subdirectory supported by DOS, making it possible to store the image data in a hierarchical structure. Figs. 4-7; col. 7, lines 47-55; col. 14, line 53 – col. 16, line 15. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | The instruction set stored in the processor and memory is adapted to utilize a FAT file system serial driver associated with the PC to communicate with the PC. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. Images are stored as files organized by a directory or subdirectory supported by DOS, making it possible to store the image data in a hierarchical structure. Figs. 4-7; col. 7, lines 47-55; col. 14, line 53 – col. 16, line 15. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | The instruction set stored in the processor and memory is adapted to utilize a FAT file system serial driver associated with the PC to communicate with the PC. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. Images are stored as files organized by a directory or subdirectory supported by DOS, making it possible to store the image data in a hierarchical structure. Figs. 4-7; col. 7, lines 47-55; col. 14, line 53 – col. 16, line 15. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| **N*12** | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| **N*13** | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| **N*14** | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | The instruction set stored in the processor and memory is adapted to utilize a FAT file system serial driver associated with the PC to communicate with the PC. *E.g.* Col. 20, lines 24-61; col. 28, line 53 – col. 29, line 6; claims 1, 9, 14, 17, 23, 27. Images are stored as files organized by a directory or subdirectory supported by DOS, making it possible to store the image data in a hierarchical structure. Figs. 4-7; col. 7, lines 47-55; col. 14, line 53 – col. 16, line 15. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,806,072 |
|---|---|---|
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A19

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,812,879 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Adapter 1 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host computer 2 |
| **C** | a data transmit/receive device, | Multiple devices can be connected to ports 25, 30, 32, and 33 and to PWM signal generator 31 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | RC measurement port 33 inherently receives analog data from a device |
| **D** | a processor; | Adapter CPU 23 |
| **E** | a memory; | RAM 27, Program ROM 26 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Adapter serial port 24 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Ports 25, 30, 32, and 33 and PWM signal generator 31 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Since adapter 1 can include an ADC, adapter 1 inherently includes a sampling circuit (see col. 7, lines 6-14) |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Adapter 1 can include an ADC (see col. 7, lines 6-14) |
| **H** | wherein the interface device is configured by the processor and the memory | Rom 26 stores an operating program for the adapter 1 (see col. 6, lines 63-67; col. 8, lines 39-44)) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,812,879 |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,812,879 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Adapter 1 translates commands received from the host computer 2 to actions with the adapter 1 and translates data read from the peripheral ports to messages for transmission to the host computer 2 (col. 8, lines 60-67) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,812,879 |
|---|---|---|
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,812,879 |
|---|---|---|
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,812,879 |
|---|---|---|
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 812,879 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 812,879 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 812,879 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 812,879 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 812,879 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 812,879 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A20

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The "interface device" of the camera 100 comprises at least a microprocessor 50 inside CPU 23 and a memory (control program storing area 51, FIFO circuit or memory 13, and memory card 16). See FIG. 8. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Hashimoto '604 Patent discloses a digital camera 100 that can be connected to a computer (host device) through an external communication interface 180 to transfer image and/or audio data to and from the computer. See Abstract and col. 4, lines 48-56. |
| **C** | a data transmit/receive device, | The "data transmit/receive device" of the camera can be the image photographing section 6, which further includes a photographing lens 7, a lens opening 8, and an image photographing element 9 such as a CCD. See FIG. 8. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | At least the CCD is arranged for providing analog image data. |
| **D** | a processor; | The CPU 23 contains a microprocessor 50 and RAM 52. See col. 8, lines 48-52. |
| **E** | a memory; | The digital camera 100 has a control program storing area 51, a built-in memory, in the CPU 23 to store an operating system for the microprocessor in the system. In addition, the digital camera 100 has the FIFO circuit or memory 13, and memory card 16 to store the digital pixel signals. See col. 8, lines 37-62. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The digital camera 100 can connect to an RS-232 or RS-422 interface of a computer through an external communication interface 180 to transfer image and/or audio data to and from the computer. See col. 8, lines 4-7. FIG. 8 shows that the digital camera 100 can communicate with a communication device, such as a computer, via the interface circuit 27 and the signal level conversion circuit 28. The signal level conversion circuit 28 can be disposed on the external communication interface 180. Thus, a first connecting device comprises at least the interface circuit 27 and the signal level conversion circuit 28. Either an RS-232 or an RS-422 interface is a multi-purpose interface. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The digital camera 100 comprises a sampler CDS and a A/D converter for sampling and converting the analog image data output by the CCD to digital data. See col. 6, lines 45-55 and FIG. 8. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Same as above |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Same as above. |
| **H** | wherein the interface device is configured by the processor and the memory | The CPU 23 contains a microprocessor 50 and RAM 52, as well as memory 55 for storing BIOS routines and other routine used by the camera. See col. 8, lines 48-58. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **H1** | to include a first command interpreter and a second command interpreter, | The routines stored in memory 51 comprise a first and second command interpreter. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | After the camera 100 is connected to a computer via the RS-232 standard interface, it monitors the DTR signal from the computer to determine if it is ready for data communication. See col. 10, line 41-col. 11, line 1.<br>Thus, the camera 100 inherently has a first command interpreter that responds to the computer's inquiry that it is an input/output device that the computer can communicate with, i.e. an input/output device that is customary in a computer. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The camera 100 can transmit data to the computer, thus it inherently contains a second command interpreter is that is configured to interpret a data request command from the computer to the camera as a data transfer command for initiating a transfer of the digital data to the computer. See col. 11, lines 13-33. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | FIFO circuit 13 and memory card 16. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The CPU 23 is communicate with a Digital Signal Processing Circuit. See FIG. 8. Thus the CPU 23 is a digital signal processor. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*1 | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| N*2 | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| N*3 | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| N*4 | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| B*2 | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| Z* | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| B*3 | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| B*1 | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| A | **[Start of '449 Patent]**<br>**Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| B1 | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| C | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| D | a processor; | See '399 claim 1, row D. |
| E | a memory; | See '399 claim 1, row E. |
| F | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| G | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| H | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| I | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| J | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| K2 | which signals to the host device that it is a storage device customary in a host device, | |
| L2 | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*5 | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| Y* | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| K2* | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| E* | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A21

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The "interface device" of the camera 100 comprises at least a microprocessor 50 inside CPU 23 and a memory (control program storing area 51, FIFO circuit or memory 13, and memory card 16). See FIG. 8. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Hashimoto '604 Patent discloses a digital camera 100 that can be connected to a computer (host device) through an external communication interface 180 to transfer image and/or audio data to and from the computer. See Abstract and col. 4, lines 48-56. |
| **C** | a data transmit/receive device, | The "data transmit/receive device" of the camera can be the image photographing section 6, which further includes a photographing lens 7, a lens opening 8, and an image photographing element 9 such as a CCD. See FIG. 8. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | At least the CCD is arranged for providing analog image data. |
| **D** | a processor; | The CPU 23 contains a microprocessor 50 and RAM 52. See col. 8, lines 48-52. |
| **E** | a memory; | The digital camera 100 has a control program storing area 51, a built-in memory, in the CPU 23 to store an operating system for the microprocessor in the system. In addition, the digital camera 100 has the FIFO circuit or memory 13, and memory card 16 to store the digital pixel signals. See col. 8, lines 37-62. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The digital camera 100 can connect to an RS-232 or RS-422 interface of a computer through an external communication interface 180 to transfer image and/or audio data to and from the computer. See col. 8, lines 4-7. FIG. 8 shows that the digital camera 100 can communicate with a communication device, such as a computer, via the interface circuit 27 and the signal level conversion circuit 28. The signal level conversion circuit 28 can be disposed on the external communication interface 180. Thus, a first connecting device comprises at least the interface circuit 27 and the signal level conversion circuit 28. Either an RS-232 or an RS-422 interface is a multi-purpose interface. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The digital camera 100 comprises a sampler CDS and a A/D converter for sampling and converting the analog image data output by the CCD to digital data. See col. 6, lines 45-55 and FIG. 8. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Same as above |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Same as above. |
| **H** | wherein the interface device is configured by the processor and the memory | The CPU 23 contains a microprocessor 50 and RAM 52, as well as memory 55 for storing BIOS routines and other routine used by the camera. See col. 8, lines 48-58. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **H1** | to include a first command interpreter and a second command interpreter, | The routines stored in memory 51 comprise a first and second command interpreter. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | After the camera 100 is connected to a computer via the RS-232 standard interface, it monitors the DTR signal from the computer to determine if it is ready for data communication. See col. 10, line 41-col. 11, line 1.<br>Thus, the camera 100 inherently has a first command interpreter that responds to the computer's inquiry that it is an input/output device that the computer can communicate with, i.e. an input/output device that is customary in a computer. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The camera 100 can transmit data to the computer, thus it inherently contains a second command interpreter is that is configured to interpret a data request command from the computer to the camera as a data transfer command for initiating a transfer of the digital data to the computer. See col. 11, lines 13-33. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | FIFO circuit 13 and memory card 16. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The CPU 23 is communicate with a Digital Signal Processing Circuit. See FIG. 8. Thus the CPU 23 is a digital signal processor. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*1 | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| N*2 | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| N*3 | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| N*4 | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| B*2 | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| Z* | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| B*3 | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| B*1 | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| A | **[Start of '449 Patent]**<br>**Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| B1 | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| C | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| D | a processor; | See '399 claim 1, row D. |
| E | a memory; | See '399 claim 1, row E. |
| F | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| G | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| H | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| I | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| J | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| K2 | which signals to the host device that it is a storage device customary in a host device, | |
| L2 | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*5 | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| Y* | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| K2* | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| E* | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A22

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,841,471 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Digital Camera 10 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host computer 12 |
| **C** | a data transmit/receive device, | Lens 18 and Imager 20 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The output of imager 20 is an analog image signal |
| **D** | a processor; | Microprocessor 38 |
| **E** | a memory; | SRAM 34 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | USB device I/F 40 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Gain & CDS 24 and ADC 26 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Gain & CDS 24 |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC 26 |
| **H** | wherein the interface device is configured by the processor and the memory | |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,841,471 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images are transferred from SRAM 34 to the host computer 12 via the USB interface 40 (see col. 3, line 37 – col. 4, line 59) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,841,471 |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images are transferred from SRAM 34 to the host computer 12 via the USB interface 40 (see col. 3, line 37 – col. 4, line 59) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,841,471 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,841,471 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 841,471 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 841,471 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 841,471 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 841,471 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 841,471 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 841,471 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A23

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,844,961 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Digital cassette 200 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Computer 220 |
| **C** | a data transmit/receive device, | Imaging array system 450 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Imaging array system captures the X-ray image as analog data (see col. 8, lines 38-45) |
| **D** | a processor; | CPU 2050 (see Fig. 20) |
| **E** | a memory; | RAM 2030, ROM 2035 (see col. 15, lines 10-35 and Fig. 20) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | I/O 2060 (see Fig. 20) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Readout electronics 2012, frame buffer 2014 (see Fig. 20) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Sample and hold 2160 (see col. 18, lines 4-9) |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | The captured light is converted into a digital image (see col. 8, lines 38-45 and col. 17, lines 59-51) |
| **H** | wherein the interface device is configured by the processor and the memory | ROM 2035 includes the software necessary to run the digital cassette 200 (see col. 15, lines 31-35 and Fig. 20) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,844,961 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images are transferred from the RAM 203 via the communications link 210 to the computer 220 (see col. 26, lines 13-17) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,844,961 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images are transferred from the RAM 203 via the communications link 210 to the computer 220 (see col. 26, lines 13-17) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,844,961 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,844,961 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 844,961 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 844,961 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 844,961 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 844,961 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 844,961 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 844,961 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A24

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Components of camera 70 interfacing the CCD 80 with the microprocessor-based unit 20 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Microprocessor-based unit 20 uses a Windows-based operating system and has a Serial port 75 |
| **C** | a data transmit/receive device, | CCD 80 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | CCD 80 generates an analog signal representative of a captured image |
| **D** | a processor; | Camera 70 inherently includes a processor for controlling the operation of the camera |
| **E** | a memory; | Memory 62 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Cable 76 connects camera 70 with serial port 75 of microprocessor-based unit 20 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Camera 70 inherently includes circuitry for connecting the CCD 80 with the other components of the camera 70 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Camera 70 inherently includes a sampler as part of the process of converting the analog signal from the CCD 80 into a digital image signal |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Camera 70 inherently includes an ADC as part of the process of converting the analog signal from the CCD 80 into a digital image signal |
| **H** | wherein the interface device is configured by the processor and the memory | Camera 70 inherently includes a processor that operates in accordance with programming stored in a memory in the camera 70 |
| **H1** | to include a first command interpreter and a second command interpreter, | See column 4, lines 4-45 |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | No explicit disclosure of an inquiry from the microprocessor-based unit 20 to the camera 70 |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | No explicit disclosure of an inquiry from the microprocessor-based unit 20 to the camera 70 nor a corresponding response signal |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | No explicit disclosure of an inquiry from the microprocessor-based unit 20 to the camera 70 nor a corresponding response signal |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | Microprocessor-based unit 20 communicates with camera 70 using a software program configured as a disk device driver (see col. 4, lines 4-45) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | After mounting the camera 70 as a disk drive and verifying the camera 70 is connected, each image is downloaded from the memory 62 of the camera 70 to memory 92 in microprocessor-based unit 20 (see col. 4, lines 32-45) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Serial port 75 is inherently a multi-purpose interface<br>The software program is configured as a disk device driver to enable communication between the camera 70 and the microprocessor-based unit 20 via the serial port 75 (see col. 4, lines 4-45 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | Microprocessor-based unit 20 communicates with camera 70 using a software program configured as a disk device driver (see col. 4, lines 4-45) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | The Windows operating system inherently includes a hard disk driver<br>No explicit disclosure of an inquiry from the microprocessor-based unit 20 to the camera 70 nor a corresponding response signal |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | No disclosure of structure in camera 70 during data transfer but well known in the art to use buffer |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | No disclosure of SCSI interface |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | Camera 70 inherently includes a DSP as part of the digital image processing of the captured image before storing in memory 62 |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | A virtual file allocation table is calculated for the image files stored in the memory 62 of camera 70 (see col. 4, line 45 – col. 5, line 47). |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | No disclosure of an ASPI manager |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | The Windows operating system inherently includes a hard disk driver |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | No explicit disclosure of an inquiry from the microprocessor-based unit 20 to the camera 70 nor a corresponding response signal |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | Microprocessor-based unit 20 communicates with camera 70 using a software program configured as a disk device driver (see col. 4, lines 4-45) |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | A virtual file allocation table is calculated for the image files stored in the memory 62 of camera 70 (see col. 4, line 45 – col. 5, line 47) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | A virtual file allocation table is calculated for the image files stored in the memory 62 of camera 70 (see col. 4, line 45 – col. 5, line 47) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **N*12** | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| **N*13** | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| **N*14** | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | See col. 4, line 45 – col. 5, line 47. |
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | See col. 4, line 45 – col. 5, line 47. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,848,420 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The software program is configured as a disk device driver to enable communication between the camera 70 and the microprocessor-based unit 20 via the serial port 75 (see col. 4, lines 4-45 |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A25

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,914,748 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Camera 40 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host computer 44 |
| **C** | a data transmit/receive device, | Lens 50, CCD 52 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | CCD 52 generates an analog digital image |
| **D** | a processor; | Control electronics 58 |
| **E** | a memory; | Memory card 98 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Interface 56 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | ADC 54 interfacing to the CCD 52 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Inherent in the process of converting the analog image signal into a digital signal |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | ADC 54 |
| **H** | wherein the interface device is configured by the processor and the memory | |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,914,748 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images are transferred to the computer 44 from the camera 40 via the USB interface cable 46 |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,914,748 |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Images are transferred to the computer 44 from the camera 40 via the USB interface cable 46 |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,914,748 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | DSP 88 (see col. 4, lines 31-37) |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,914,748 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 914,748 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 914,748 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 914,748 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 914,748 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 914,748 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 914,748 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A26

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | General purpose computer 2 having a standardized operating system (see col. 5, lines 32-35) that inherently includes drivers for I/O devices and having a SCSI card 17 as a multi-purpose interface (see Fig. 3) |
| **C** | a data transmit/receive device, | Scanner optics 45 of scanner 6 that includes a CCD |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The CCD of the scanner optics 45 produces an analog signal representative of the image scanned by the scanner 6 |
| **D** | a processor; | Scanner control block 43 |
| **E** | a memory; | Memory 47 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Electronics in scanner 6 coupling the scanner 6 to the SCSI bus |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Electronics in scanner 6 coupling the CCD of the scanner optics 45 to the rest of the scanner 6 |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Inherent in the scanner 6 for processing the analog signal generated by the CCD of the scanner optics 45 |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Inherent in the scanner 6 for generating a digital signal from the analog signal generated by the CCD of the scanner optics 45 |
| **H** | wherein the interface device is configured by the processor and the memory | The scanner control block 43 is a programmable device operating based on a set of firmware instructions stored in the memory 47 (see col. 6, lines 7-19) |
| **H1** | to include a first command interpreter and a second command interpreter, | Memory 47 includes a setup program storage area 47A and a firmware storage area 47b (see col. 5, line 54 – col. 6, line 40) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62) |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62) |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62) |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The disk drive emulator 41 enables the computer 2 to interact with the scanner 6 as if it is a disk drive, and because a disk drive is a standard device, all operating systems are able to perform basic disk drive functions such as opening and closing a file (see col. 2, lines 57-67; col. 6, lines 30-59; col. 8, lines 63-67; col. 9, lines 1-12) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | In response to a File Open command, the scanner 6 performs a scan and transfers image data to the computer 2 (see col. 6, lines 42-59) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Prior art systems uses a specific driver for the interface (see col. 1, line 25 – col. 2, line 38) |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | Prior art systems uses a specific driver for the interface (see col. 1, line 25 – col. 2, line 38) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Image data is stored in memory 47 as a file accessible to computer 2 (see col. 7, lines 40-44) |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | SCSI card 17<br>Scanner 6 inherently includes a SCSI interface to be able to connect to the SCSI bus |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | It is inherent that the scanner 6 includes a digital signal processor to process the image data detected by the scanner optics 45 |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | SCSI driver 13 |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | Computer 2 communicates with scanner 6 using a standard disk drive device driver (see col. 2, lines 57-67) |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | When attached to the SCSI bus, the disk drive emulating scanner is identified as a disk drive because the disk drive emulator 41 provides electronic signals identical to those of a standard disk drive (see col. 8, lines 50-62) |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The disk drive emulator 41 enables the computer 2 to interact with the scanner 6 as if it is a disk drive, and because a disk drive is a standard device, all operating systems are able to perform basic disk drive functions such as opening and closing a file (see col. 2, lines 57-67; col. 6, lines 30-59; col. 8, lines 63-67; col. 9, lines 1-12) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,915,106 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The disk drive emulator 41 enables the computer 2 to interact with the scanner 6 as if it is a disk drive, and because a disk drive is a standard device, all operating systems are able to perform basic disk drive functions such as opening and closing a file (see col. 2, lines 57-67; col. 6, lines 30-59; col. 8, lines 63-67; col. 9, lines 1-12) |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A27

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,920,709 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Nest 30 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Computer system 20 |
| **C** | a data transmit/receive device, | Device 40, i.e., a storage device such as a tape drive, hard drive or removable disk (see col. 3, lines 23-28) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | DI machine 100 and EPRAN machine 102 (see col. 4, lines 60-67);<br>Microprocessor 1000 (see col. 16, lines 31-40 and Fig. 13) |
| **E** | a memory; | Inherently included with the DI machine 100 and EPRAN machine 102 in order to perform their disclosed functions |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Nest to host connector 52 (see col. 4, lines 11-16) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Nest to device connector 50 (see col. 4, lines 11-16) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | Nest 30 operates in accordance with the functioning of the DI machine 200, which responds to commands issued from device 40, and EPRAN machine, which responds to commands issued from host computer 20 (see col. 4, lines 17-59) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,920,709 |
|---|---|---|
| **H1** | to include a first command interpreter and a second command interpreter, | Nest 30 operates in accordance with the functioning of the DI machine 200, which responds to commands issued from device 40, and EPRAN machine, which responds to commands issued from host computer 20 (see col. 4, lines 17-59) |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | Nest 30 operates in accordance with the functioning of the DI machine 200, which responds to commands issued from device 40, and EPRAN machine, which responds to commands issued from host computer 20 (see col. 4, lines 17-59) |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | When host computer system 20 sends a command, Nest responses in a manner consistent with the ATA or ATAPI protocols (see col. 5, lines 25-47);<br>During initialization, nest 30 performs a standard ATA initialization (see col. 7, lines 11-15)<br>If a device 40 is installed in nest 30, the response to the "identify device" command is an IDE-device indicative value (see col. 15, lines 40-51) |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | If a device 40 is installed in nest 30, the response to the "identify device" command is an IDE-device indicative value (see col. 15, lines 40-51) |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | Port driver 228 enables a particular device driver provided in the operating system of the host computer 20 for the type of device 40, a library of such device drivers being provided in the operating system and being standardized (see col. 15, lines 30-39) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,920,709 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | It is inherent that after a device 40 has been initialized that requests from host computer 20 for data are received by nest 30 and processed so that the requested data is provided from the device 40 to the host computer 20 via the nest 30 |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Nest driver 230 accommodates nest 30 in a type of operating system in computer system 200, and is shown as being included in disk I/O subsystem 221 (see Fig. 7 and col. 11, lines 13-21).<br>Nest driver 230 is a file of executable instructions that can automatically be included in disk I/O subsystem object 221 by providing nest driver 230 with a proper file extension so that, upon booting up, the nest driver 230 is loaded into a vendor specific driver (VSD) layer of disk I/O subsystem 221, such as one of layers 8-10, 12-17 of the IOS hierarchy levels (see col. 11, lines 21-26). |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,920,709 |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | Nest driver 230 discriminates for the presence of nest 30 by issuing a standard IDE "Identify Device" command to the IDE host adapters 63, and the nest driver 230 receives back status information that is loaded into the StatusReg register 78I. (see col. 11, lines 55-67 and Fig. 6).<br>By examining the content of the StatusReg register 78I, nest driver 230 knows when it can go and pick up further data being automatically transmitted by the IDE device on bus 60 following the status information and in response to the IDE "Identify Device" command (see col. 11, line 67 – col. 12, line 5) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,920,709 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | It is inherent that after a device 40 has been initialized that requests from host computer 20 for data are received by nest 30 and processed so that the requested data is provided from the device 40 to the host computer 20 via the nest 30 |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,920,709 |
|---|---|---|
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | Port driver 228 enables a particular device driver provided in the operating system of the host computer 20 for the type of device 40, e.g., a hard drive, a library of such device drivers being provided in the operating system and being standardized (see col. 3, lines 22-27 and col. 15, lines 30-39) |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,920,709 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | Port driver 228 enables a particular device driver provided in the operating system of the host computer 20 for the type of device 40, a library of such device drivers being provided in the operating system and being standardized (see col. 15, lines 30-39) |
| | | |

**PRIOR ART CLAIM CHART**

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 920,709 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | If a device 40 is installed in nest 30, the response to the "identify device" command is an IDE-device indicative value (see col. 15, lines 40-51) |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | Port driver 228 enables a particular device driver provided in the operating system of the host computer 20 for the type of device 40, a library of such device drivers being provided in the operating system and being standardized (see col. 15, lines 30-39) |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 920,709 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 920,709 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 920,709 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 920,709 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 920,709 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | Device 40, i.e., a storage device such as a tape drive, hard drive or removable disk (see col. 3, lines 23-28) |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A28

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,926,208 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Video camera 1000 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Computer 1002 |
| **C** | a data transmit/receive device, | Video source 1030 of video camera 1000 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Video source 1030 generates an analog image signal |
| **D** | a processor; | MEP 1024 |
| **E** | a memory; | SRAM 1033, DRAM 1027, second memory 1031 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Interface link device 1022 |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Electronics in video source 1030 that receive and transform the capture image into a digital signal (see col. 5, lines 35-37) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Inherently includes sampling as part of process for converting the analog image signal into a digital image signal |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Video source 103 receives a video image and digitizes it (see col. 5, lines 35-37) |
| **H** | wherein the interface device is configured by the processor and the memory | MEP 1024 operates in accordance with the routines stored in memory (see col. 5, line 45 – col. 6, line 34) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,926,208 |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Image data is sent through the interface link device 1022 across the USB bus 1006 to the computer 1002 (see col. 10, lines 52-67) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,926,208 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Image data is sent through the interface link device 1022 across the USB bus 1006 to the computer 1002 (see col. 10, lines 52-67) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,926,208 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | Video processor 1036 (see col. 8, lines 23-35) |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,926,208 |
|---|---|---|
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,926,208 |
|---|---|---|
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 926,208 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 926,208 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 926,208 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 926,208 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 926,208 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5, 926,208 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A29

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Memory card player/recorder 10 |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | According to another aspect of the invention, the interace apparatus supports a host mode operation, in which one of the peripheral ports, such as the parallel port, is connectable to a host computer. |
| **C** | a data transmit/receive device, | A memory card 52 |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Microprocessor 32 |
| **E** | a memory; | ROM 32 and RAM 36 |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | One of interfaces including TV/Audio interface 114, Infrared interface 124, Host IDE/SCSI interface 134, USB interface 144, and EPP/ECP port 154. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Memory ATA interface |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | Microprocessor 32.<br>ROM 32 and RAM 36 |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | It can be drivers for the SCSI, USB, or parallel port. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Inherent. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| **N*12** | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,928,347 |
|---|---|---|
| **N*13** | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| **N*14** | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A30

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See, e.g., Fig. 5, interface device 110, including connection interface and cables 117, 119 and 154. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See, e.g., Fig. 5 , host device 120.<br>"(2) Because the housing 156 need not be opened to install the camera 110, a novice user can easily install the camera 110 by simply plugging cable 119 into a standard connector 154. Using an auto-recognition process native to the USB standard, the camera 110 is automatically recognized and appropriate driver software for using the camera 110 can automatically be selected." Col. 10, ll. 11-18. |
| **C** | a data transmit/receive device, | See, e.g., Fig. 5 , data transmit/receive devices can be 162, 111, or 110. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See, e.g., Fig. 5, CCD 111 or microphone 162 are arranged to provide analog data. |
| **D** | a processor; | See, e.g., Fig. 5. The interface device is shown to include processing elements, including data processing elements, 164, 166, 113 and 115. |
| **E** | a memory; | "According to another illustrative embodiment, the camera contains at least one register or memory which contains information on the bit rate varying capabilities of the camera. Such information can be downloaded via the interfaces and communications medium to the processor in the first housing." |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See, e.g., Fig. 5, connecting device components 152 and 154. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See, e.g., Fig. 5, connecting device components 118 and 200. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | [Inherently disclosed.] |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See, e.g., Fig. 5, A/D converters 113 and 164. |
| **H** | wherein the interface device is configured by the processor and the memory | |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | "Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 50-55. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | "Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 50-55. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "Furthermore, USB provides a protocol for the computer 74 to recognize each device connected thereto. This simplifies installation of hardware components. Devices possessing such installation simplifications, i.e., simple connection and auto-recognition and configuration, are frequently said to be "plug and play." Col. 5, ll. 50-55. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | See, e.g., Fig. 5 , host device 120.<br>"(2) Because the housing 156 need not be opened to install the camera 110, a novice user can easily install the camera 110 by simply plugging cable 119 into a standard connector 154. Using an auto-recognition process native to the USB standard, the camera 110 is automatically recognized and appropriate driver software for using the camera 110 can automatically be selected." Col. 10, ll. 11-18. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,969,750 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A31

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The "ATA PCMCIA controller 14 provides an interface between PCMCIA card 12 and the host computer." Fig. 5; Col. 4, ll. 1-7. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | The host computer, such as portable computer 31. Fig. 4; Col. 1, ll. 32-46; Col. 3, ll. 14-22; Col. 4, ll. 1-39.<br>The handwritten input "files are stored within memory 43 using a standard disk operating system (OS) pointer or a file allocation table (FAT) system. This allows the host system . . . to access the handwritten inputs stored within the PCMCIA card 12 without special drivers of any kind." Fig. 5; Col. 3, l. 23 – col. 4, l. 7.<br>The "PCMCIA controller 44 communicates with the host computer through a standard PCMCIA bus 46." Figs. 4, 5; Col. 1, ll. 58-67; Col. 4, ll. 1-7. |
| **C** | a data transmit/receive device, | The write-on pad 13 is capable of transmitting and receiving data. Figs. 1-3, 5, 6; Col. 2, l. 31 – col. 3, l. 22. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The detachable card captures "graphics such as, for example a handwritten signature." Col. 1, ll. 5-8.<br>The card "uses a stylus to write a signature or some other handwritten information on write-on pad 13." Figs. 1-3, 5; Col. 1, ll. 32-41; Col. 2, l. 31 – col. 3, l. 22. |
| **D** | a processor; | The detachable card contains an ATA PCMCIA controller 44. Fig. 5; Col. 3, ll. 34-37; Col. 4, ll. 1-7.<br>The detachable card contains a microcontroller 42. Figs. 5, 6; Col. 3, ll. 23-33; Col. 4, ll. 8-26. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **E** | a memory; | The detachable card contains memory for storing graphics files and other information. Figs. 5-7; Col. 3, ll. 34-67; Col. 4, ll. 27-39.<br>The microcontroller 42 has random-access memory and read-only memory. Figs. 5, 6; Col. 3, ll. 23-33; Col. 4, ll. 8-39. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The PCMCIA controller 44 connects to the host system through a standard PCMCIA bus 46. Fig. 4, 5; Col. 1, ll. 58-67; Col. 4, ll. 1-7. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The write-on pad 13 connects to the microcontroller. Fig. 5. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The write-on pad 13, which digitizes the strokes of the pen, necessarily contains a sampling circuit. Col. 2, ll. 36-37. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | The write-on pad 13 is "used to digitize the strokes of the pen or stylus." Figs. 1-3, 5; Col. 2, l. 31-col. 3, l. 38. |
| **H** | wherein the interface device is configured by the processor and the memory | The ATA PCMCIA controller 44 provides an interface between the detachable card and the host computer. The PCMCIA controller communicates with the host computer through a standard PCMCIA bus. The ATA PCMCIA controller and memory configured as an ATA-style mass storage memory allow the host to recognize the detachable card as a standard disk drive without special drivers. Fig. 5; Col. 3, l. 23 – col. 4, l. 7. |
| **H1** | to include a first command interpreter and a second command interpreter, | Same as above. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | Same as above. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The host computer can access the files on the detachable cards using the host's standard OS software. Fig. 5; Col. 3, l. 23 – col. 4, l. 7. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | The graphics "files are stored within memory 43 using a standard disk operating system (OS) pointer or a file allocation table (FAT) system. This allows the host system . . . to access the handwritten inputs stored within the PCMCIA card 12 without special drivers of any kind." Fig. 5; Col. 3, l. 23 – col. 4, l. 7. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The graphics files are stored within memory of the detachable card and not necessarily transferred immediately to the host device. Because the detachable card has its own power system, it can capture graphics and store them in its memory even when it is separated from the host computer. Thus, the memory acts as a buffer. See Col. 6 , ll. 16-30. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | The handwritten inputs are placed in the memory of the detachable card by using a standard disk operating system pointer or a file allocation table system. Col. 3, l. 23 – col. 4, l. 7. |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | See '399 claim 2, row B*1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 5,974,161 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A32

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Interface device 60. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host system 10. "An FD [Floppy disk] BIOS be previously provided in the host system 10." Col. 6, ll. 64-65. |
| **C** | a data transmit/receive device, | E.g., floppy disk drive 70. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | See, e.g., Fig. 1, PCMCIA I/O controller 62. |
| **E** | a memory; | "To this end, the card device 60 is provided with the attribute memory (ROM) 64 in which the aforesaid CIS and CCR information is stored, so that such information can be supplied to the PCMCIA I/O controller 62." Col 6, ll. 57-60. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See, e.g., Fig. 4, showing connecting device between elements 18 and 62. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See, e.g., Fig. 4, connecting device between interface device 60 and floppy disk drive 70. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Interface device 60 interprets a data request from host as to the IC card so as to transfer data from floppy disk drive 70. See, e.g., Columns 5 and 6. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 5,991,530 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A33

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The "interface device" of the camera 10 comprises at least a microprocessor 38 and a memory (a built-in memory for the microprocessor and a static RAM memory 34). Endsley '613 Patent discloses a digital camera 10 that can be connected to a host computer 12 via the USB interface 14 in the host computer to transfer image and/or audio data to the computer. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | A host computer 12 |
| **C** | a data transmit/receive device, | The "data transmit/receive device" of the camera can include the lens 18 and the electronic image sensor 20, such as a CCD. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | the electronic image sensor 20, such as a CCD generates analog signals. |
| **D** | a processor; | microprocessor 38 |
| **E** | a memory; | a memory (a built-in memory for the microprocessor and a static RAM memory 34). |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The computer has drivers to communicate with the camera 10 through a USB interface, which is a multi-purpose interface. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Circuits including A/D converter 26. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Inherent. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | A/D converter 26. |
| **H** | wherein the interface device is configured by the processor and the memory | microprocessor 38 and a memory (a built-in memory for the microprocessor and a static RAM memory 34). |
| **H1** | to include a first command interpreter and a second command interpreter, | Inherent |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | Inherent.<br>"The camera 10 is connected to a host computer 12 via a USB (universal serial bus) digital host interface 14, which also provides power to the camera 10. USB is a well-known shared bus that can be connected to other devices, such as keyboards, printers, etc. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Inherent.<br>"The camera 10 is connected to a host computer 12 via a USB (universal serial bus) digital host interface 14, which also provides power to the camera 10. USB is a well-known shared bus that can be connected to other devices, such as keyboards, printers, etc. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Inherent. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer has drivers to communicate with the camera 10 through a USB interface, which is a multi-purpose interface. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Inherent. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,005,613 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A34

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See, e.g., Fig. 2, labeled component "Adapter." |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Fig. 2, computer 12. |
| **C** | a data transmit/receive device, | Fig. 2, external device 44. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Peripheral device can be "any device functionally connected to the CPU of a computer, such as a keyboard, video monitor, mouse, or printer." Col. 2, ll. 27-30. |
| **D** | a processor; | Fig. 3, controller 60. |
| **E** | a memory; | Fig. 3, adapter memory 62. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | E.g, Fig 2, interface 22. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | E.g, Fig 2, interface 30 and connection thereto. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Within controller 60. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | See, e.g., Fig. 2 processor/controller 60 and memory 62. |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | See col. 5, ll. 40-50. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See col. 5, ll. 40-50, in addition to disclosures of prior art emulation devices in "background of invention" section. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | See col. 5, ll. 40-50, in addition to disclosures of prior art emulation devices in "background of invention" section. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | See col. 5, ll. 40-50. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See col. 5, ll. 40-50, in addition to disclosures of prior art emulation devices in "background of invention" section. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,081,856 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A35

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The "interface device" of the camera comprises at least a microprocessor and a memory. Yamamoto '532 Patent discloses a still video camera 11 that can be connected to a computer through an output terminal 17 to transfer image data to the computer. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | A computer. |
| **C** | a data transmit/receive device, | The "data transmit/receive device" of the camera includes a photographing optical system 12, an electro-developing recording medium 30, and a scanning mechanism 50 to provide analog data. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The "data transmit/receive device" of the camera includes a photographing optical system 12, an electro-developing recording medium 30, and a scanning mechanism 50 to provide analog data. |
| **D** | a processor; | "FIG. 2 is a block diagram of the still video camera, in which a system control circuit 20 including a micro-computer or micro-processor is mounted to control the still video camera as a whole." (FIG. 2 and col. 6, lines 7-10.) |
| **E** | a memory; | The still video camera has a memory to store an operating system for the microprocessor in the system control circuit and at least a memory 64 to store the digital pixel signals. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The still video camera has the output terminal 17 to connect with the SCSI interface of a computer. A first connecting device comprises at least the output terminal 17. The SCSI interface of a computer is a multi-purpose interface. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The still video camera has a line sensor 44, which can comprise a one-dimensional CCD sensor. The line sensor 44 forms at least a portion of the "data transmit/receive device." Pixel signals generated by the line censor 44 are sampled and converted to digital signals by an A/D converter 62. The A/D converter forms at least a portion of the "second connecting device." |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Inherent. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | A/D converter 62. |
| **H** | wherein the interface device is configured by the processor and the memory | The still video camera which has a microprocessor and a memory storing its operating system is adapted to include a first command interpreter and a second command interpreter, both of which are used for communication between the still video camera and the computer. |
| **H1** | to include a first command interpreter and a second command interpreter, | Same as above. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | With a microprocessor and a memory storing its operating system, the still video camera is adapted to include a first command interpreter which receives an "inquiry" command signal from the SCSI interface of a host computer and responds with an signal so that the host computer recognizes that it can communicate with the still video camera by drivers for a hard disk as if it communicates with a real mass storage device.<br><br>"In Step 106, the first mode, i.e., an external hard disk mode is set. In the external hard disk mode, the still video camera is used as an external memory for the computer. Namely, the computer outputs an "INQUIRY" command signal, for example, to the still video camera, and in accordance with this signal, the still video camera outputs data indicating that the external hard disk mode is set, due to the fact that the mode switch 19 is set to the first mode. Whereby the computer outputs command signals such as "READ CAPACITY" and "FORMAT UNIT" to the still video camera, so that the hard disk 71 is controlled." (col. 23, lines 30-43.) |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The still video camera which has a microprocessor and a memory storing its operating system is adapted to include a first command interpreter and a second command interpreter, both of which are used for communication between the still video camera and the computer. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | It depends on whether SCSI interface has a specific driver. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | The host computer can communicate with the still video camera by drivers for a hard disk as if it communicates with a real mass storage device. |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The still video camera has a memory to store an operating system for the microprocessor in the system control circuit and at least a memory 64 to store the digital pixel signals. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | Possible. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | With a microprocessor and a memory storing its operating system, the still video camera is adapted to include a first command interpreter which receives an "inquiry" command signal from the SCSI interface of a host computer and responds with an signal so that the host computer recognizes that it can communicate with the still video camera by drivers for a hard disk as if it communicates with a real mass storage device. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | U.S. Patent No. 6,088,532 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The computer has drivers for a hard disk 71 and a SCSI interface, which is a multi-purpose interface, to communicate with the still video camera 11. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A36

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See, e.g., Fig. 1B, interface device is local controller 4. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See, e.g., Fig. 1B, host device 2. Customary drivers, such as FieldBus, are included in the host device. See Col. 5, l. 63 – Col. 6, l. 8. |
| **C** | a data transmit/receive device, | See, e.g., Fig. 1B, field devices 6 and 12. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See Col. 5, ll. 57-62. The data transmit/receive devices in the field include "pumps, motors, valves, etc." which would measure and provide analog data in many cases.<br><br>"A smart device is a field device that is implemented to transmit and receive digital data pertaining to a device, including data relating to device calibration, configuration, diagnostics and maintenance. Typically, the smart device is also adapted to transmit a standard **analog signal** that is indicative of various information including, for example, a process value measured by a field device." Col. 15, l. 64 – col. 16, l. 18. |
| **D** | a processor; | See, e.g., Fig. 1B, ROMs in local controller 4. |
| **E** | a memory; | See, e.g., Fig. 1B, CPU in local controller 4. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Host PC 2 is connected to the LAN via local area network card. Col. 5, ll. 17-18. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Local controller 4 is interfaced with field devices 6-15. See Figs. 1A and 1B; col. 5, ll. 56-62. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | See, e.g., Fig. 1B, local controller 4 having CPU and memory ROM. |
| **H1** | to include a first command interpreter and a second command interpreter, | [Within local controller 4.] |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | See col. 6, l. 55 – col. 7, l. 26. Host PC 2 communicates with both the protocol and non-protocol field devices using FieldBus (a customary driver in the host). If the field device is non-protocol, the local controller 4 (i.e., the interface device) will perform the necessary conversion so that the host can communicate by the standard protocol. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See col. 6, l. 55 – col. 7, l. 26. A FieldBus data request command would be converted by the interpreter in the local controller, if necessary, to translate it for a non-protocol field device to initiate transfer of data. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| E* | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| Z* | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| D* | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| M* | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| N*1 | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| N*2 | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| N*3 | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| N*4 | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | US Patent No. 6,098,116 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A37

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The "interface device" of the camera 100 comprises at least a microprocessor 50 inside CPU 23 and a memory (control program storing area 51, FIFO circuit or memory 13, and memory card 16). See FIG. 8. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Hashimoto '604 Patent discloses a digital camera 100 that can be connected to a computer (host device) through an external communication interface 180 to transfer image and/or audio data to and from the computer. See Abstract and col. 4, lines 48-56. |
| **C** | a data transmit/receive device, | The "data transmit/receive device" of the camera can be the image photographing section 6, which further includes a photographing lens 7, a lens opening 8, and an image photographing element 9 such as a CCD. See FIG. 8. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | At least the CCD is arranged for providing analog image data. |
| **D** | a processor; | The CPU 23 contains a microprocessor 50 and RAM 52. See col. 8, lines 48-52. |
| **E** | a memory; | The digital camera 100 has a control program storing area 51, a built-in memory, in the CPU 23 to store an operating system for the microprocessor in the system. In addition, the digital camera 100 has the FIFO circuit or memory 13, and memory card 16 to store the digital pixel signals. See col. 8, lines 37-62. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The digital camera 100 can connect to an RS-232 or RS-422 interface of a computer through an external communication interface 180 to transfer image and/or audio data to and from the computer. See col. 8, lines 4-7. FIG. 8 shows that the digital camera 100 can communicate with a communication device, such as a computer, via the interface circuit 27 and the signal level conversion circuit 28. The signal level conversion circuit 28 can be disposed on the external communication interface 180. Thus, a first connecting device comprises at least the interface circuit 27 and the signal level conversion circuit 28. Either an RS-232 or an RS-422 interface is a multi-purpose interface. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The digital camera 100 comprises a sampler CDS and a A/D converter for sampling and converting the analog image data output by the CCD to digital data. See col. 6, lines 45-55 and FIG. 8. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Same as above |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Same as above. |
| **H** | wherein the interface device is configured by the processor and the memory | The CPU 23 contains a microprocessor 50 and RAM 52, as well as memory 55 for storing BIOS routines and other routine used by the camera. See col. 8, lines 48-58. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **H1** | to include a first command interpreter and a second command interpreter, | The routines stored in memory 51 comprise a first and second command interpreter. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | After the camera 100 is connected to a computer via the RS-232 standard interface, it monitors the DTR signal from the computer to determine if it is ready for data communication. See col. 10, line 41-col. 11, line 1.<br>Thus, the camera 100 inherently has a first command interpreter that responds to the computer's inquiry that it is an input/output device that the computer can communicate with, i.e. an input/output device that is customary in a computer. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The camera 100 can transmit data to the computer, thus it inherently contains a second command interpreter is that is configured to interpret a data request command from the computer to the camera as a data transfer command for initiating a transfer of the digital data to the computer. See col. 11, lines 13-33. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The computer will certainly use the standard RS-232 drivers to communicate with the camera 100. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | FIFO circuit 13 and memory card 16. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The CPU 23 is communicate with a Digital Signal Processing Circuit. See FIG. 8. Thus the CPU 23 is a digital signal processor. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*1 | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| N*2 | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| N*3 | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| N*4 | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| B*2 | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| Z* | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| B*3 | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| B*1 | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| A | **[Start of '449 Patent]**<br>**Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| B1 | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| C | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| D | a processor; | See '399 claim 1, row D. |
| E | a memory; | See '399 claim 1, row E. |
| F | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| G | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| H | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| I | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| J | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| K2 | which signals to the host device that it is a storage device customary in a host device, | |
| L2 | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*5 | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | U.S. Patent No. 5,815,201<br>U.S. Patent No. 5,815,205<br>U.S. Patent No. 6,111,604<br>U.S. Patent No. 6,344,875<br>U.S. Patent No. 7,046,276 |
|---|---|---|
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| Y* | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| K2* | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| E* | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A38

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Interface device 72, see Fig. 2. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host device 20, see Fig. 2. (Drivers customary for the host device are inherently disclosed.) |
| **C** | a data transmit/receive device, | Data transmit/receive device 22, see Fig. 2. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | See col. 10, ll. 41-63. Fig. 7 shows that the interface device 72 includes processor subcircuits and logic circuits 130, 134, 136 and 142. |
| **E** | a memory; | See col. 10, ll. 41-63. Fig. 7 shows that the interface device 72 includes memory RAM 140. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Fig. 2, communication subchannel 74 and I/O port 34 of the host device. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Fig. 2, communication subchannel 76 and I/O port 52 of the host device. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | See col. 10, ll. 41 – col. 11, l. 14. |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| **N*12** | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,182,145 |
|---|---|---|
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| Y* | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| K2* | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| E* | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A39

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The '388 discloses a interface device for communication. See Fig. 1. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Fig. 1, Host device 90. |
| **C** | a data transmit/receive device, | Fig. 1., external data-transmit/receive device 11. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Fig. 1., CPU 65; external device control 4. |
| **E** | a memory; | Fig. 1, RAM 82; external device control 4. The Pseudo IC card can also have the memory in a ROM 12. Col. 5, ll. 31-40. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Fig. 1, IC Card Connector. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Fig. 1, Cable 8. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | See Fig. 1, including processor and memory shown on the interface device. |
| **H1** | to include a first command interpreter and a second command interpreter, | Within CPU 65. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | Col. 4, ll. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See, e.g., Col 3, ll. 15-20 |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | External devices that can be hooked up to the interface include hard disks (col. 3, ll. 5-10), and appropriate drivers are disclosed. See, e.g., Fig 4, S4 and S5. |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| Y* | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| K2* | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | US Patent No. 6,298,388 (Taguchi) |
|---|---|---|
| E* | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A40

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | "The main use of these cameras is to digitalize images and to transfer the digital data to computers." ([0005]) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | A host device 59 (Fig. 1). "At this timing, the host equipment is currently a computer in current situation, especially, a personal computer … ." ([0057])<br>It was well-known in the art that personal computers include drivers for input/output devices customary in them. *See, e.g.,*'399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device … are found in practically all host devices.").<br><br>"The PCMCIA standard defines PCMCIA-ATA (AT bus attachable), a generic standard that defines the communication algorism between the CPU and the internal/external memory on the computer side, allowing read operation directly if the pair of a memory card and a computer are compliant to said ATA algorism." ([0059])<br><br>"In addition, the memory card reader system handling PCMCIA standard used connecting to each personal computer with SCSI cables as such is in the hardware/software market, and currently, even on a personal computer without a slot for the PCMCIA standard memory cards, the environment is available where the PCMCIA standard memory cards can be used as an external memory device." ([0061]) |
| **C** | a data transmit/receive device, | CCD 20 (Fig. 1). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | "… light coming from objects via each of lenses 11 and 13 in the lens assembly 10 and the aperture (iris) 12 is focused on said CCD image sensor 20, and after photoelectrical conversion here, they are read out in non-interlace in order of the sensor alignment and input to the analog imaging signal processing circuit 31."([0037]) |
| **D** | a processor; | A system control CPU 41 and a flash memory control CPU 39 (Fig. 1).<br>"In the description above, there are two kinds of CPUs installed in the digital electronic still camera according to the embodiment. One is the CPU 41 for controlling the system control/image processing inside the camera, while another one is the CPU 39 for flash memory control/communication with host equipment. As easily expected from the functions provided by both CPU and the original nature of CPU, as a second illustrative embodiment, it is possible to combine multiple CPUs to one chip CPU, allowing it to be made smaller and reducing the material cost." ([0063]) |
| **E** | a memory; | A flame memory 35 (Fig. 1) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The system control CPU 41 and a pin connector 68 (Fig. 1). "Now in the digital electronic still camera according to the embodiment, once pictures are taken, image data are transferred to the host equipment 59 via the 68-pin connector 43."([0057]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | A signal processing circuit 31 (Fig. 1). "… light coming from objects via each of lenses 11 and 13 in the lens assembly 10 and the aperture (iris) 12 is focused on said CCD image sensor 20, and after photoelectrical conversion here, they are read out in non-interlace in order of the sensor alignment and input to the analog imaging signal processing circuit 31."([0037]) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The signal processing circuit 31 (Fig. 1). "In this signal processing circuit 31, a predefined analog process such as sample hold or gain control is performed on the imaging signals from said CCD image sensor 20."([0037]) |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | The signal processing circuit 31 (Fig. 1). "The image signals processed in said signal processing circuit 31 are digitalized in the analog/digital converting circuit 32."([0037]) |
| **H** | wherein the interface device is configured by the processor and the memory | The system control CPU 41, the flash memory control CPU 39 and a flame memory 35 (Fig. 1). |
| **H1** | to include a first command interpreter and a second command interpreter, | The system control CPU 41, the flash memory control CPU 39 and a flame memory 35 (Fig. 1). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | "At this timing, the CPU on the computer side accesses the CPU 39 for controlling memory that resides in the memory card unit 60 in the electronic still camera according to the embodiment. The PCMCIA standard defines PCMCIA-ATA (AT bus attachable), a generic standard that defines the communication algorism between the CPU and the internal/external memory on the computer side, allowing read operation directly if the pair of a memory card and a computer are compliant to said ATA algorism. On the other hand, if the pair of a memory card and a computer are not compliant to the ATA standard or only either one of those is compliant to the ATA standard, driver software is required on the computer side for the read operation according to the interface specification of the memory card."([0059]) |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The ATA standard is typically used by a hard disk drive customarily found in a host device. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | "At this timing, the CPU on the computer side accesses the CPU 39 for controlling memory that resides in the memory card unit 60 in the electronic still camera according to the embodiment." ([0059]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | A host device 59 (Fig. 1). "At this timing, the host equipment is currently a computer in current situation, especially, a personal computer … ." ([0057])<br>It was well-known in the art that personal computers include drivers for input/output devices customary in them. *See, e.g.,*'399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device … are found in practically all host devices.").<br><br>"The PCMCIA standard defines PCMCIA-ATA (AT bus attachable), a generic standard that defines the communication algorism between the CPU and the internal/external memory on the computer side, allowing read operation directly if the pair of a memory card and a computer are compliant to said ATA algorism." ([0059]) |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The ATA standard is typically used by a hard disk drive customarily found in a host device. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | "The image signals processed in said interpolating process DSP 33 are separated into brightness (Y) signals and color difference (Cr/Cb) signals and entered into the frame memory controller (FMC) 34 and stored in the frame memory (FM) 35 controlled by this controller 34. Said frame memory 35 is memory for storing signals via said controller 34 temporarily, which is comprised of a DRAM (Dynamic Random Access Memory) device, for example." ([0039]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | "In addition, the memory card reader system handling PCMCIA standard used connecting to each personal computer with SCSI cables as such is in the hardware/software market, and currently, even on a personal computer without a slot for the PCMCIA standard memory cards, the environment is available where the PCMCIA standard memory cards can be used as an external memory device."([0061]) |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | "The image signals processed in said signal processing circuit 31 are digitalized in the analog/digital converting circuit 32. In the areas beyond this point, signals are digitally processed. "([0037]).<br>The system control CPU 41 and the flash memory control CPU 39 are digital signal processors. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-130702 |
|---|---|---|
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | The ATA standard is typically used by a hard disk drive customarily found in a host device. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-130702 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The ATA standard is typically used by a hard disk drive customarily found in a host device. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-130702 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-130702 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-130702 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-130702 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | "At this timing, the CPU on the computer side accesses the CPU 39 for controlling memory that resides in the memory card unit 60 in the electronic still camera according to the embodiment." ([0059]) |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-130702 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The ATA standard is typically used by a hard disk drive customarily found in a host device. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A41

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | A selector 105, an interface 107 and a micro-computer 101 (Fig. 1) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | A host computer 108 (Fig. 1).<br>"If the host computer 108 supports SCSI …" ([0011]). Thus, it is indicated that the host computer 108 has a multi-purpose interface. |
| **C** | a data transmit/receive device, | A scanner 102 (Fig. 1) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | It is not explicitly disclosed that the scanner 102 provides analog data. A scanner, however, generally generates analog data corresponding to the scanned object. |
| **D** | a processor; | CPU 101-a (Fig. 2) |
| **E** | a memory; | RAM 101-c (Fig. 2) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The interface 107 and the selector 105 (Fig. 1)<br>"In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices. The command is received by the communications interface 107 (S31). If the command read from the interface 107 is the command to enter the access mode (S32), the microcomputer 101 switches the selector 105 and sets so that the hard disk 106 is connected to the host computer 108 side (S33)." ([0011]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | A part of the scanner 102 (Fig. 1)<br>"Operation is such that the data of a manuscript image read by the scanner 102 is sent to the printer 104 via the buffer memory 103, and an image is formed on a storage sheet, OHP sheet, etc. In addition, it can be saved on the hard disk 106 via the selector 105." ([0011]).<br>Thus, the scanner 102 has a portion for interfacing with the buffer memory 103. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | It is not explicitly disclosed that the scanner 102 includes a sampling circuit. A scanner, however, generally generates analog data corresponding to the scanned object, samples the analog data and converts the analog data into digital data. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | It is not explicitly disclosed that the scanner 102 includes an analog-to-digital converter. A scanner, however, generally generates analog data corresponding to the scanned object, samples the analog data and converts the analog data into digital data. |
| **H** | wherein the interface device is configured by the processor and the memory | The CPU 101-a, the ROM 101-b and the RAM 101-c (Fig. 2) |
| **H1** | to include a first command interpreter and a second command interpreter, | The CPU 101-a |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | It was well known that the SCSI interface of a host computer sends an inquiry with respect to the type of the device connected to the host computer. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | It was well known that the image forming device 10 replies the answer to the host computer 108 with respect to the type of the device 10 connected to the host computer 108. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | "In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011])<br>That is, the image forming device 10 replies that it is an hard disk drive customary in the host computer 108. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011])<br>"The printer 20 in this mode behaves as if it were an external hard disk device, as viewed from the host computer 108, so it is possible to directly create a file containing the data output from the host computer 108 on the hard disk 106 within the printer 20. Naturally, in addition to creating output data, it also can be used in work areas, etc., as a normal external storage device." ([0017]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | "If the host computer 108 supports SCSI, it is connected to the host computer 108 side by the selector, and thereafter, the host computer 108 becomes capable of freely accessing the hard disk 106, by using a method that is exactly the same as that for an ordinary external storage device." ([0011])<br>"The printer 20 in this mode behaves as if it were an external hard disk device, as viewed from the host computer 108, so it is possible to directly create a file containing the data output from the host computer 108 on the hard disk 106 within the printer 20. Naturally, in addition to creating output data, it also can be used in work areas, etc., as a normal external storage device." ([0017]) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | A host computer 108 (Fig. 2).<br>"If the host computer 108 supports SCSI …" ([0011]). Thus, it is indicated that the host computer 108 has a multi-purpose interface. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | "In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011])<br>"The printer 20 in this mode behaves as if it were an external hard disk device, as viewed from the host computer 108, so it is possible to directly create a file containing the data output from the host computer 108 on the hard disk 106 within the printer 20. Naturally, in addition to creating output data, it also can be used in work areas, etc., as a normal external storage device." ([0017]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | "In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011]) |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | For the second embodiment, it is disclosed "… a microcomputer 101 transparently passes to the hard disk 106 the commands/data received from the host computer 108, and enters the mode that performs the operation of similarly passing transparently to the host computer the response from the hard disk 106." ([0017])<br>However, the second embodiment is directed to a laser beam printer, not to the scanner system. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | "In the present embodiment, the hard disk 106 is for SCSI bus connection, which is quite common in the case of the external storage device for a small computer. If the host computer 108 supports SCSI, …" ([0011]) |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | "101-a is a central processing unit (CPU)" ([0008]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | "… the present embodiment is configured such that the file management format in the hard disk 106 shared with the host computer is matched with the file storage format used by the host computer OS (operating system), so the host has no trouble reading or writing data." ([0015]) |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 06-83917 |
|---|---|---|
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | "In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 06-83917 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | "In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011]) |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the <u>virtual file system</u> including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 06-83917 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 06-83917 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 06-83917 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 06-83917 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | "… the present embodiment is configured such that the file management format in the hard disk 106 shared with the host computer is matched with the file storage format used by the host computer OS (operating system), so the host has no trouble reading or writing data." ([0015]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 06-83917 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | "In the access mode, the host computer 108 can access the hard disk 106 in the same manner as an internal disk drive, without awareness of the external devices." ([0011]) |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A42

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP08-328990 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Computer 2 functions as an interface between Computer 1 and the disk 162 (Fig. 1). |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Computer 1 includes a SCSI board 201 (Fig. 1). "SCSI, the abbreviation for Small Computer Systems Interface, is the ANSI (American National Standards Institute) standard for connecting computers and auxiliary storage devices." ([0026]). |
| **C** | a data transmit/receive device, | Disk 162 (Fig. 1) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Computer 2 comprises a CPU 122 (Fig. 1). |
| **E** | a memory; | The SCSI board 203 included in Computer 2 comprises a buffer 232 (Figs. 1 and 2). "232 is the buffer to which are written data and commands to be sent, and in which received data and commands are stored." ([0036]). |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Computer 2 includes a SCSI board 203, which interfaces Computer 1 with Computer 2 via the SCSI board 201 (Fig. 1). |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Computer 2 includes a SCSI board 202, which interfaces Computer 2 with the disk 162 (Fig. 1). |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | Computer 2 includes the CPU 122 and the buffer 232 (Fig. 2). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP08-328990 |
|---|---|---|
| **H1** | to include a first command interpreter and a second command interpreter, | "The SCSI controller 234 outputs data to other equipment via the SCSI connector 22, and receives data from other equipment in accordance with the SCSI standard. This protocol is defined in the written standard ANSI X3.131-1986. Regarding the control register 233, the SCSI controller 234 operates by the writing of instructions to this register 233 by the CPU 121. These instructions include selection, data out, command, and message out." ([0035]) |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | "Moreover, in the SCSI standard, a device type code that differentiates among the types of connected equipment is provided. A direct-access device (e.g., a magnetic disk) is specified by code = 0, and a processor device (e.g., a computer) is specified by code = 3. This device type code is set in registers 181-186. The registers 181, 182 of the SCSI boards 201, 202 housed within the computer contain processor device code = 3 as the device type code. The registers 185, 186 of the disk controllers 151, 152 contain direct-access device code = 0." ([0028]).<br>"Figure 9 is the flowchart that explains the disk emulation process of the computer system. This process is executed on the master-system computer 112, and it causes the SCSI board 203 to emulate a disk." ([0049])<br>"Figure 10 is the flowchart that shows the Inquiry process. " ([0051]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP08-328990 |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | "This process 34 is called at step 333 of Figure 9, as a result of the reception of the Inquiry command at the SCSI board 203 of the slave-system computer 112. The Inquiry command requests equipment information. Here, the slave-system computer 112 operates as a virtual disk, so information regarding the disk 162 is returned as the equipment information." ([0052]) |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | "This process 34 is called at step 333 of Figure 9, as a result of the reception of the Inquiry command at the SCSI board 203 of the slave-system computer 112. The Inquiry command requests equipment information. Here, the slave-system computer 112 operates as a virtual disk, so information regarding the disk 162 is returned as the equipment information." ([0052]) |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "Furthermore, in the present embodiment, direct-access code = 0, not processor device code = 3, is set in the registers 183, 184 of the SCSI boards 203, 204. As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP08-328990 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | "Figure 12 is the flowchart showing the sRead process. This process 36 is called at step 335 of Figure 9, as a result of the reception of the Read command at the SCSI board of the slave-system computer. The sRead command is a command that requests a disk read. At step 361, it is decided whether or not data whose reading was requested are in the disk buffer 29. If they are, the data are sent at step 363. If not, at step 362, the specified data are read from the disk 162 to the disk buffer 29, after which the data are sent at step 363." ([0054]). |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Computer 1 includes a SCSI board 201 (Fig. 1). "SCSI, the abbreviation for Small Computer Systems Interface, is the ANSI (American National Standards Institute) standard for connecting computers and auxiliary storage devices." ([0026]). |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP08-328990 |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | "Furthermore, in the present embodiment, direct-access code = 0, not processor device code = 3, is set in the registers 183, 184 of the SCSI boards 203, 204. As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029]) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP08-328990 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP08-328990 |
|---|---|---|
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | "SCSI, the abbreviation for Small Computer Systems Interface, is the ANSI (American National Standards Institute) standard for connecting computers and auxiliary storage devices." ([0026]). "As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029]) |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | "232 is the buffer to which are written data and commands to be sent, and in which received data and commands are stored." ([0036]). |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | Computer 1 includes a SCSI board 201 (Fig. 1). Computer 2 includes a SCSI board 203 (Fig. 1). |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The CPU 122 processes digital signals. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | "As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029])<br>Thus, the data to be transferred to the Computer 1 is formatted in the same format (i.e., suitable format) for the disk 161. |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP08-328990 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | "As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP08-328990 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | "This process 34 is called at step 333 of Figure 9, as a result of the reception of the Inquiry command at the SCSI board 203 of the slave-system computer 112. The Inquiry command requests equipment information. Here, the slave-system computer 112 operates as a virtual disk, so information regarding the disk 162 is returned as the equipment information." ([0052]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP08-328990 |
|---|---|---|
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | "As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029]) |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP08-328990 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP08-328990 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP08-328990 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP08-328990 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | "As a result, the computer 111 recognizes the computer 112 as if it were a disk, thereby enabling the transfer of data to the computer 112 by using the programs for accessing the disk 161." ([0029])<br>Thus, the data to be transferred to the Computer 1 is formatted into blocks having a predetermined size being suited for a disk. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP08-328990 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | Disk 161 (Fig. 1) |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A43

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 02-51727 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Control board 3 (Figs. 1 and 2) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Personal Computer 1 (Figs. 1 and 2).<br>"The aforementioned personal computer 1 contains an internal floppy disk device 7 that reads and writes data and programs, as an auxiliary storage device." (page 202, the lower right column, lines 5-8). Thus, the personal computer 1 has a driver for the auxiliary storage device.<br>"The control board 3 controls the access of the personal computer 1 to the optical card read/write device 2 and is mounted in a slot of the personal computer 1, where it is used." (page 202, the lower right column, lines 16-19). Thus, the personal computer 1 has a slot as a multi-purpose interface. |
| **C** | a data transmit/receive device, | Optical card read/write device 2 (Figs. 1 and 2) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Directory expansion processing unit 10 and Retrieval processing unit 11 (Fig. 2) |
| **E** | a memory; | "The aforementioned directory expansion processing unit 10 reads the directory of the optical card, converts [the directory] into a format compatible with the OS of the personal computer 1, and expands [the directory] on a storage unit, such as RAM, of the control board 3." (page 3, the upper left column, lines 12-17) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Personal computer interface processing unit 15 (Fig. 2) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 02-51727 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | I/O interface processing unit 16 (Fig. 2) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | The directory expansion processing unit 10, the retrieval processing unit 11 (Fig. 2) and the RAM of the control board 3 (see page 3, the upper left column, lines 4-17). |
| **H1** | to include a first command interpreter and a second command interpreter, | The directory expansion processing unit 10 and the retrieval processing unit 11 (Fig. 2) |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "…, the main body of the computer is connected to a control board that controls the optical recording medium read/write device, to enable access in the same manner as an existing magnetic disk device and the like." (page 204, the upper left column, lines 11-22)<br>Thus, the personal computer 1 can access the optical recording medium by the driver for the internal magnetic disk device. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 02-51727 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | "Secondly, the retrieval processing unit 11 receives information regarding the read data sent from the personal computer 1 and checks whether or not the data exists in the storage unit of the control board 3. If it does, the data is transferred to the personal computer 1 by the data transfer/receiving unit 12.<br>If it does not exist, the data is read from the optical card via the data I/O processing unit 14. Then, the data transfer/receiving unit 12 stores [the data] in the storage unit of the control board 3, after which [the data] is transferred to the personal computer 1, so that it will not be necessary to later access the same data from the optical card." (page 203, the lower left column, lines 7-21). |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 02-51727 |
|---|---|---|
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Personal Computer 1 (Figs. 1 and 2).<br>"The aforementioned personal computer 1 contains an internal floppy disk device 7 that reads and writes data and programs, as an auxiliary storage device." (page 202, the lower right column, lines 5-8). Thus, the personal computer 1 has a driver for the auxiliary storage device.<br>"The control board 3 controls the access of the personal computer 1 to the optical card read/write device 2 and is mounted in a slot of the personal computer 1, where it is used." (page 202, the lower right column, lines 16-19). Thus, the personal computer 1 has a slot as a multi-purpose interface. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 02-51727 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | "…, the main body of the computer is connected to a control board that controls the optical recording medium read/write device, to enable access in the same manner as an existing magnetic disk device and the like." (page 204, the upper left column, lines 11-22)<br>Thus, the personal computer 1 can access the optical recording medium by the driver for the internal magnetic disk device. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 02-51727 |
|---|---|---|
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 02-51727 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | "If it does not exist, the data is read from the optical card via the data I/O processing unit 14. Then, the data transfer/receiving unit 12 stores [the data] in the storage unit of the control board 3, after which [the data] is transferred to the personal computer 1, so that it will not be necessary to later access the same data from the optical card." (page 203, the lower left column, lines 14-21) |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | Since the directory expansion processing unit 10 and the retrieval processing unit 11 process digital signals, they are digital signal processors. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 02-51727 |
|---|---|---|
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 02-51727 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | "…, the main body of the computer is connected to a control board that controls the optical recording medium read/write device, to enable access in the same manner as an existing magnetic disk device and the like." (page 204, the upper left column, lines 11-22)<br>Thus, the personal computer 1 can access the optical recording medium by the driver for the internal magnetic disk device. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 02-51727 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | "The aforementioned directory expansion processing unit 10 reads the directory of the optical card, converts [the directory] into a format compatible with the OS of the personal computer 1, and expands [the directory] on a storage unit, such as RAM, of the control board 3." (page 203, the upper left column, lines 12-17) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 02-51727 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | "The aforementioned directory expansion processing unit 10 reads the directory of the optical card, converts [the directory] into a format compatible with the OS of the personal computer 1, and expands [the directory] on a storage unit, such as RAM, of the control board 3." (page 203, the upper left column, lines 12-17) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 02-51727 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 02-51727 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 02-51727 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | "The aforementioned directory expansion processing unit 10 reads the directory of the optical card, converts [the directory] into a format compatible with the OS of the personal computer 1, and expands [the directory] on a storage unit, such as RAM, of the control board 3." (page 203, the upper left column, lines 12-17)<br>"Secondly, the retrieval processing unit 11 receives information regarding the read data sent from the personal computer 1 and checks whether or not the data exists in the storage unit of the control board 3. If it does, the data is transferred to the personal computer 1 by the data transfer/receiving unit 12." (page 203, the lower left column, lines 7-13) |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 02-51727 |
|---|---|---|
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A44

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 04-309156 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Terminal device 200 (Fig. 1) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host processor 100 (Fig. 1).<br>"The broad configuration of the host computer includes the central processing unit 101, the RAM 102, the ROM 103, and the input and output ports 104, as is commonly known." ([0013]). |
| **C** | a data transmit/receive device, | Image capture device 209 (Fig. 1) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | "The image capture device 209 is comprised of a television camera 209A and an AD converter 209B that performs AD conversion of the image capture signal output from the television camera. The image capture signal is digitized and input to the input and output ports 204." ([0015]) |
| **D** | a processor; | "… the terminal device 200 of the present invention consists of processor functions comprised of the central processing unit 201 similar to the host processor 100, the RAM 202, the ROM 203, and the input and output ports 204, as well as the virtual disk 205." ([0015]) |
| **E** | a memory; | "… the terminal device 200 of the present invention consists of processor functions comprised of the central processing unit 201 similar to the host processor 100, the RAM 202, the ROM 203, and the input and output ports 204, as well as the virtual disk 205." ([0015]) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Virtual disk 205 (Fig. 1) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Input and output ports 205 (Fig. 1) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 04-309156 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | "The image capture device 209 is comprised of a television camera 209A and an AD converter 209B that performs AD conversion of the image capture signal output from the television camera. The image capture signal is digitized and input to the input and output ports 204." ([0015])<br>It was well known that the AD conversion involves sampling the analog data provided by the television camera. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | "The image capture device 209 is comprised of a television camera 209A and an AD converter 209B that performs AD conversion of the image capture signal output from the television camera. The image capture signal is digitized and input to the input and output ports 204." ([0015]) |
| **H** | wherein the interface device is configured by the processor and the memory | "… the terminal device 200 of the present invention consists of processor functions comprised of the central processing unit 201 similar to the host processor 100, the RAM 202, the ROM 203, and the input and output ports 204, as well as the virtual disk 205." ([0015]) |
| **H1** | to include a first command interpreter and a second command interpreter, | The central processing unit 201 (Fig. 1). |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 04-309156 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019])<br>Thus, the host processor 100 communicates with the virtual disk 205 by a driver used for its own disk. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | "Therefore, a control command string passed to the terminal device 200 can be written to the virtual disk 205 using, for instance, the COPY command. … When the terminal device 200 detects the completion of a write to the virtual disk 205, then the OS emulator 202A interprets the command string, and the various image processing is executed by running the functions in the terminal in accordance with the control command string." ([0020])<br>"The host processor 100 can take in the index data written to the virtual disk 205 to its own RAM 102.." ([0021]) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Host processor 100 (Fig. 1).<br>"The broad configuration of the host computer includes the central processing unit 101, the RAM 102, the ROM 103, and the input and output ports 104, as is commonly known." ([0013]). |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 04-309156 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019])<br>Thus, the host processor 100 communicates with the virtual disk 205 by a driver for its own input and output ports 104. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 04-309156 |
|---|---|---|
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 04-309156 |
|---|---|---|
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019]) |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | RAM 202 (Fig.1) |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The central processing unit 201 processes digital signals. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019])<br>Thus, the data transferred from the image capture device 209 and stored in the virtual disk 205 is formatted in the same format as that of a disk of the host processor 100 (i.e., suitable for the disk of the host processor 100). |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 04-309156 |
|---|---|---|
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019]) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 04-309156 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019])<br>Thus, the host processor 100 communicates with the virtual disk 205 by a driver used for its own disk. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 04-309156 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019])<br>The virtual disk 205 inherently includes a directory structure. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 04-309156 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 04-309156 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 04-309156 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 04-309156 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019])<br>Thus, the data transferred from the image capture device 209 and stored in the virtual disk 205 is formatted into a predetermined size suitable for a disk. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 04-309156 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | "The host processor 100 can treat the virtual disk 205 in the same way it would its own disk as a result of these environment settings." ([0019]) |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A45

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-223341 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | A part including a signal processing 110, an A/D converter 112, a memory controller 116, a flame memory 118, and a communication interface circuit 124 (Fig. 1) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | An external device 20 (Fig. 2). "The communication interface 202 includes a receiver for receiving data from the camera 20 [sic] via the data line of the cable 30 and a driver for sending to the data line as on/off control signals the data sending enable/disable [state] according to the control of the computer 204." ([0027])<br>It was well-known in the art that personal computers include drivers for input/output devices customary in them. *See, e.g.*,'399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device … are found in practically all host devices."). |
| **C** | a data transmit/receive device, | CCD 108 (Fig. 1). |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | "The signal processing circuit 110 includes a clamp circuit for keeping constant the direct current level of the image signals from the imaging device 108, a white balance adjustment circuit for adjusting the white balance, a gamma correction circuit for correcting the gamma characteristics and the like, and supplies to the analog-digital converter circuit (A/D) 112 the analog image signals for which the respective processes have been implemented." ([0018]) |
| **D** | a processor; | CPU 130 (Fig. 1) |
| **E** | a memory; | A flame memory 118 (Fig. 1) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-223341 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | A communication interface circuit 124 (Fig. 1) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Signal Processing 110 and A/D converter 112 (Fig. 1) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | "The analog/digital converter circuit 112 is a converter circuit for converting analog RGB image signals to digital RGB image data of, for example, 8 to 10 bits respectively according to those levels." ([0018])<br>The A/D converter circuit 112 inherently samples the output of the signal processing 110 to convert it into a digital signal. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | "The analog/digital converter circuit 112 is a converter circuit for converting analog RGB image signals to digital RGB image data of, for example, 8 to 10 bits respectively according to those levels." ([0018]) |
| **H** | wherein the interface device is configured by the processor and the memory | CPU 130 and a flame memory 118 (Fig. 1) |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-223341 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "The communication interface 202 includes a receiver for receiving data from the camera 20 [sic] via the data line of the cable 30 and a driver for sending to the data line as on/off control signals the data sending enable/disable [state] according to the control of the computer 204." ([0027]) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | An external device 20 (Fig. 2).<br>"The communication interface 202 includes a receiver for receiving data from the camera 20 [sic] via the data line of the cable 30 and a driver for sending to the data line as on/off control signals the data sending enable/disable [state] according to the control of the computer 204." ([0027])<br>It was well-known in the art that personal computers include drivers for input/output devices customary in them. *See, e.g.,*'399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device … are found in practically all host devices."). |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-223341 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-223341 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-223341 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | "The YC image data from the Y/C processing circuit 114, with normal image capture, is accumulated once in the frame memory 118 via the memory controller 116 under the control of the control processor (CPU) 130." ([0019]) |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | "The YC image data from the Y/C processing circuit 114, with normal image capture, is accumulated once in the frame memory 118 via the memory controller 116 under the control of the control processor (CPU) 130." ([0019]) |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 08-223341 |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-223341 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | "The communication interface 202 includes a receiver for receiving data from the camera 20 [sic] via the data line of the cable 30 and a driver for sending to the data line as on/off control signals the data sending enable/disable [state] according to the control of the computer 204." ([0027]) |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-223341 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-223341 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-223341 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-223341 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 08-223341 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A46

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 07-177406 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | A part including an A/D converter 4, a flame memory 6, a system control circuit 12 and a serial interface 20 (Fig. 1) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | "Fig. 3 is a configuration block diagram showing a processing system to perform conversion and processing of data received together with a display program, as described above, in a personal computer on the receiving side." ([0024])<br>It was well-known in the art that personal computers include drivers for input/output devices customary in them. *See, e.g.,*'399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device … are found in practically all host devices."). |
| **C** | a data transmit/receive device, | CCD 2 (Fig. 1) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | "The object image, focused on the CCD2 via the lens 1, is converted into electrical signals. Then, γ correction and other prescribed processing is performed by the image capture processing circuit 3, and the result is converted into digital signals by the A/D converter (ADC) 4." ([0011]) |
| **D** | a processor; | A system control circuit 12 (Fig. 1) |
| **E** | a memory; | A flame memory 6 (Fig. 1) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The serial interface 20 (Fig. 1) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The imaging process 3 and the A/D converter 4 (Fig. 4) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 07-177406 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | "The object image, focused on the CCD2 via the lens 1, is converted into electrical signals. Then, γ correction and other prescribed processing is performed by the image capture processing circuit 3, and the result is converted into digital signals by the A/D converter (ADC) 4." ([0011])<br>The A/D converter inherently samples the output of the processing circuit 3 to convert it into a digital signal. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | "The object image, focused on the CCD2 via the lens 1, is converted into electrical signals. Then, γ correction and other prescribed processing is performed by the image capture processing circuit 3, and the result is converted into digital signals by the A/D converter (ADC) 4." ([0011]) |
| **H** | wherein the interface device is configured by the processor and the memory | The system control circuit 12 and the flame memory 6 (Fig. 1) |
| **H1** | to include a first command interpreter and a second command interpreter, | The system control circuit 12 |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 07-177406 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "Camera image data obtained by the camera on the transmitting side is played back on the camera side, and is transmitted, as camera image files, together with a display program or the like via a modem and general public circuits. In the personal computer on the receiving side, the image data and program data are received via modem, and based on the program data, the received image data is converted into personal computer image data and is displayed on a monitor." ([0029]) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | "Fig. 3 is a configuration block diagram showing a processing system to perform conversion and processing of data received together with a display program, as described above, in a personal computer on the receiving side." ([0024])<br>It was well-known in the art that personal computers include drivers for input/output devices customary in them. *See, e.g.*,'399 Patent Specification, col. 4, lines 27-30 ("Drivers for input/output devices customary in a host device … are found in practically all host devices."). |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 07-177406 |
|---|---|---|
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 07-177406 |
|---|---|---|
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 07-177406 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | "At the time of recording, the selector 5 sets a path for the recording of the digital image data from the A/D converter 4 to frame memory (RAM) 6. Block data (data in each divided block when a screen is divided into a plurality of blocks) read out from the frame memory 6 are supplied to a compression/decompression unit 8 through a selector 7." ([0011]) |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | "Encoding and other processing in this compression/expansion unit 8 is controlled based on instructions from the system control circuit 12." ([0012]) |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | JP 07-177406 |
|---|---|---|
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 07-177406 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 07-177406 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 07-177406 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 07-177406 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 07-177406 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | JP 07-177406 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A47

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The entire book describes various aspects of SCSI being used as an interface for communication. See, e.g., page 207, Figure 17.2 and accompanying description. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See, e.g., page 207, Figure 17.2. The "Workstation (Initiator)" is the host device. The host device comprises drivers for I/O devices customary in a host device and a multi-purpose interface. Specifically, these are the drivers for the SCSI interface, including those that send the standard SCSI commands through the interface (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2). |
| **C** | a data transmit/receive device, | See page 207, Figure 17.2. The device labeled "Experiment" is the data transmit/receive device that is attached to the interface PC (Target). |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See page 207, Figure 17.2. The data transmit/receive device labeled "Experiment" is arranged for providing analog data, which is shown by the lines entering the A/D converter of the interface PC. See also the second full paragraph on p. 207, discussing the interface PC taking the peripheral device's data into it's A/D converter for "preprocessing". |
| **D** | a processor; | See page 207, Figure 17.2. The "second application PC" (the interface PC) necessarily includes a processor. This is confirmed by the second full paragraph on p. 207, discussing the interface PC taking the peripheral device's data into it's A/D converter for "preprocessing". |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **E** | a memory; | See page 207, Figure 17.2. The "second application PC" (the interface PC) necessarily includes a memory. Indeed, all PCs include memory of various types. See, e.g., page 3, showing a computer, including a CPU and "Main memory". |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See page 207, including Figure 17.2. The data transfer line labeled "SCSI" is shown connecting the host device (Workstation) to the interface device PC (Target). The cable/line would attach to the multipurpose interface of the host device, i.e. its SCSI port. See also page 96, discussing the SCSI connectors allowing connection to a host PC, and page 89 (same). |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See page 207, including Figure 17.2. The data transfer line labeled "SCSI" is shown connecting the data transmit/receive device (labeled "Experiment") to the interface device PC (Target). See also page 96, discussing the SCSI connectors allowing connection to a host PC, and page 89 (same). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See, e.g., page 207, including Figure 17.2. The analog data provided by the data transmit/receive device (labeled "Experiment") is shown by the lines entering the A/D converter of the interface PC. The interface would necessarily include a sampling circuit working in conjunction with the A/D converter to convert the analog data to digital data.<br><br>See also the second full paragraph on p. 207, discussing the interface PC taking the peripheral device's data into it's A/D converter and thereby functioning as "a data acquisition system". |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See, e.g., page 207, including Figure 17.2. The analog data provided by the data transmit/receive device (labeled "Experiment") is shown by the lines entering the A/D converter of the interface PC. The interface would necessarily include a sampling circuit working in conjunction with the A/D converter to convert the analog data to digital data.<br><br>See also the second full paragraph on p. 207, discussing the interface PC taking the peripheral device's data into it's A/D converter and thereby functioning as "a data acquisition system". |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **H** | wherein the interface device is configured by the processor and the memory | See page 207 including Figure 17.2. The interface device is PC (Target). This interface PC is configured by a processor and memory (as identified above). |
| **H1** | to include a first command interpreter and a second command interpreter, | See page 207 including Figure 17.2. The first command interpreter and second command interpreter are included in the interface PC (Target) for interpreting commands from the host (Workstation) and to acquiring data from the data transmit receive device. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | See page 207 including Figure 17.2. The standard SCSI INQUIRY command, which would be sent by the host (Workstation) to the interface's (Target) first command interpreter, is shown on page 208, in Figure 17.1. Opcode 12h is the INQUIRY received by the interface (Target) PC. This INQUIRY is as to the type of device attached to the SCSI (multipurpose) interface of the host. See pages 138-139, detailing the INQUIRY and response to INQUIRY under the SCSI command set. ("The inquiry command tells us about a LUN … This command can be used to learn…the device type….) Page 138. The list of possible responses as to "Device Class" are shown in Table 12.1 on page. 133. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See pages 138-139, detailing the INQUIRY and response to the INQUIRY under the SCSI command set. Table 12.11 on page 139 shows the INQUIRY (12h) command in the first byte. The responsive signal is shown in Table 12.12, under the field "Device Class". The list of possible responses as to "Device Class" are shown in Table 12.1 on page. 133.<br>In the example of Figure 17.2 on p. 207, the interface PC (Target) would respond that its "Device Class" is "Processor Device" (code 03h from Table 12.1, page 133). Indeed, the entire chapter 17, "Processor Devices," from which the relevant example is found, is dedicated to describing application of device type "Processor Device". |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | See above. A response indicating a device class of "Processor Device" tells the host (Workstation) that it is effectively attached to a standard I/O device customary in a host device, and thus that it can issue standard SCSI commands to communicate with the attached device.<br>See also page 207 ("SCSI is powerful in this area because it allows customized hardware to be controlled using an industry standard interface"). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | See pages 207-208. The host (Workstation) can communicate with the interface PC (Target) using standard SCSI commands via the standard SCSI command driver that is customary in the host device. See description above.<br><br>See also page 207:<br>"SCSI is powerful in this area because it allows customized hardware to be controlled using an industry standard interface." |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See pages 207-208, including Figure 17.2. The command interpreter of the interface PC (Target) interprets a SCSI data request (see, e.g., Receive/Read commands in Table 17.1) as a data transfer command transferring digital data to the host [Workstation].<br>"The second application [Interface] is a PC equipped with an A/D converter, which together function as a data acquisition system. The PC collects all of the necessary data and is even capable of preprocessing. It plays the role of a SCSI target and <u>delivers the preprocessed data to a workstation [Host]</u>." Page 207. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | See, e.g., page 207, Figure 17.2. The "Workstation (Initiator)" is the host device. The host device comprises drivers for I/O devices customary in a host device and a multi-purpose interface. Specifically, these are the drivers for the SCSI interface, including those that send the standard SCSI commands through the interface (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2). |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See pages 207-208. The host (Workstation) can communicate with the interface PC (Target) using standard SCSI commands via the standard SCSI command driver that is customary in the host device. See description above.<br><br>See also page 207:<br>"SCSI is powerful in this area because it allows customized hardware to be controlled using an industry standard interface." |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | See, e.g., page 207, Figure 17.2. The "Workstation (Initiator)" is the host device. The host device comprises drivers for I/O devices customary in a host device and a multi-purpose interface. Specifically, these are the drivers for the SCSI interface, including those that send the standard SCSI commands through the interface (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2). |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | Inherently disclosed since the interface PC (Target) has memory which would act as a buffer when transferring the data from the data transmit/receive device (Experiment) to the host (Workstation). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | See, e.g., page 207, Figure 17.2. The "Workstation (Initiator)" is the host device and is connected to the interface by its SCSI interface. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | See pages 207-208, including Figure 17.2. The processor of the interface PC (Target) would include a DSP. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI hard drive. |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | See, e.g., page 207, Figure 17.2. The host device comprises drivers for I/O devices customary in a host device. Specifically, these are the drivers for the SCSI interface, including those that send the standard SCSI commands for a SCSI hard disk drive (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI hard drive. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | See, e.g., page 207, Figure 17.2. The host device comprises drivers for storage devices customary in a host device. Specifically, these are the drivers for the SCSI interface, including those that send the standard SCSI commands for a SCSI hard disk drive (see standard SCSI command tables on page 208, Table 17.1, and page 164, Table 13.2). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI hard drive. |

| Code | USP 6,895,449's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI hard drive. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | The SCSI Bus and IDE Interface Book (Friedhelm Schmidt, 1995) |
|---|---|---|
| **N*15** | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | See pages 207-208. The interface inherently disclose proper formatting of the data acquired from the data transmit/receive device into a predetermined size suitable for storage in the host computer.<br>"The second application [Interface] is a PC equipped with an A/D converter, which together function as a data acquisition system. The PC collects all of the necessary data and is even capable of preprocessing. It plays the role of a SCSI target and delivers the preprocessed data to a workstation [Host]." Page 207. |
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | Inherently disclosed since the host device thinks it is talking to, for instance, a standard SCSI hard drive. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A48

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Tasler's Thesis |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See the whole circuit except the PC block in pg. 39. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See the PC block on pg. 39. |
| **C** | a data transmit/receive device, | It is the STM scanner providing the "Tunneling Current I" on pg. 39. Pgs. 4-7 provide description of STM. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The Tunneling Current I is analog data. See pg. 4-7. |
| **D** | a processor; | The DSP in pg. 39 is a processor. |
| **E** | a memory; | The DSP in pg. 39 has 10KB on-chip memory. See pgs. 18. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See the MUX that connects to the PC via the PC's LPT1 port on pg. 39. See also pgs. 19-22. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See the TLC320AC01 chip that connects to the "Tunneling Current I" on pg. 39. See also pg. 23. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The TLC320AC01 chip that connects to the "Tunneling Current I" has A/D converter and sampling circuit. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Same as above. |
| **H** | wherein the interface device is configured by the processor and the memory | The DSP in pg. 39 is configured by the processor and on-chip memory to communicate with the PC via the LPT port. See pgs. 19-20. |
| **H1** | to include a first command interpreter and a second command interpreter, | The DSP has built-in software that forms a first and a second command interpreter. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Tasler's Thesis |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The DSP communicates with the PC via the LPT printer port. Therefore, there is a first command interpreter software in the DSP that tells the PC that it is a printer. See pgs. 19-20. Note that additional software in the PC side is needed to further process the in-coming data. See pg. 30, para. 2. and pg. 31, parsa. 3-4. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Same as above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | Because the LPT port is a standard interface on the PC, the PC will use the standard LPT driver to communicate with the DSP. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | There is software in the DSP (a second command interpreter) that transmit data to the PC in response to a request from the PC. See pg. 31, para 3. "While scanning along the surface of the sample, the DSP transmits pre-processed image data to the PC. Meanwhile the PC is displaying and storing all information." |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | Same as "A" above. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The PC has a LPT port, which is a multi-purpose interface. Because the LPT port is a standard interface, the PC has a specific driver for the LPT interface. |
| **C** | a data transmit/receive device | Same as "C" above. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | Same as "C1" above. |
| **D** | a processor; | Same as "D" above. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Tasler's Thesis |
|---|---|---|
| **E** | a memory; | Same as "E" above. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Same as "F" above. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Same as "G" above. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Same as "G1" above. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | Same as "G2" above. |
| **H** | where the interface device is configured using the processor and the memory | Same as "H" above. |
| **H1** | to include a first command interpreter and a second command interpreter, | Same as "H1" above. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | Same as "I" above. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | Same as "J" above. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | Same as "K1" above. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | Same as "L1" above. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Same as "M" above. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | Same as "A" above. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Same as "B1" above. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Tasler's Thesis |
|---|---|---|
| **C** | a data transmit/receive device | Same as "C" above. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | Same as "C1" above. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | Same as "F" above. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | Same as "G" above. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | Same as "G1" above. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | Same as "G2" above. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | Same as "I" above. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | Same as "J" above. |
| **K1** | in such a way that it is an input/output device customary in a host device, | Same as "K1" above. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | Same as "L1" above. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | Same as "M" above. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Tasler's Thesis |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | See pg. 20, paras. 3-6. "The interface of the DSP is buffered …" |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The DSP comprises a digital signal processor. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Tasler's Thesis |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Tasler's Thesis |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Same as "A" above. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Same as "B1" above. |
| **C** | a data transmit/receive device comprising the following features: | Same as "C" above. |
| **D** | a processor; | Same as "D" above. |
| **E** | a memory; | Same as "E" above. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Same as "F" above. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | Same as "G" above. |
| **H** | wherein the interface device is configured by the processor and the memory | Same as "H" above. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | Same as "I" above. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as "J" above. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Tasler's Thesis |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | Same as "A" above. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | Same as "B2" above. |
| **C** | and a data transmit/receive device comprising the following features: | Same as "C" above. |
| **D** | a processor; | Same as "D" above. |
| **E** | a memory; | Same as "E" above. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Same as "F" above. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | Same as "G" above. |
| **H** | where the interface device is configured using the processor and the memory | Same as "H" above. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | Same as "I" above. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Same as "J" above. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Tasler's Thesis |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | Same as "A" above. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | Same as "B1" above. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | Same as "C" above. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | Same as "F" above. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | Same as "G" above. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | Same as "I" above. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | Same as "J" above. |
| **K2** | in such a way that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Tasler's Thesis |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Tasler's Thesis |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Tasler's Thesis |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | |

# Exhibit A49

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Intelligent controller (Hardware Solutions, p. 88) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Host computer (Hardware Solutions, p. 88) |
| **C** | a data transmit/receive device, | WORM Disk (Hardware Solutions, p. 88) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Inherent in controller for translating commands from host computer to WORM disk |
| **E** | a memory; | Firmware (Hardware Solutions, p. 88) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | SCSI interface connected to host computer (Hardware Solutions, p. 88) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | SCSI interface connected to WORM disk (Hardware Solutions, p. 88) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | Controller operates in accordance with the firmware (Hardware Solutions, p. 88) |
| **H1** | to include a first command interpreter and a second command interpreter, | Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88) |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88) |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88) |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The host computer inherently communicates with the driver customary for a conventional magnetic disk |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Commands from the host are converted by the controller to commands to the WORM disk and an appropriate status is returned to the host after the WORM disk completes the command (Hardware Solutions, p. 88) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | WORM disk SCSI device driver is a specific driver for the interface (Software Drivers, p. 85) |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The WORM-specific file system software allows existing utilities and applications to access files on the WORM disk (Software Drivers, p. 85) |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Commands from the host are converted by the controller to commands to the WORM disk and an appropriate status is returned to the host after the WORM disk completes the command (Hardware Solutions, p. 88) |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88) |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | There is a SCSI interface between the controller and the host computer (Hardware Solutions, p. 88) |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88) |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88) |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The host computer inherently communicates with the driver customary for a conventional magnetic disk |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Data Disasters: What Not To Do, Michael Lang (December 1993) |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | Firmware within the controller is designed to make the controller appear to the host as a conventional magnetic disk (Hardware Solutions, p. 88) |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A50

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Prior Art Reference |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Data acquisition board that could be plugged into a PC. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | A PC. Drivers and multiple-purpose interface are not specifically disclosed. |
| **C** | a data transmit/receive device, | Ultrasonic welders; high speed pneumatic actuator |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The intelligent board would acquire the analog inputs… (see page 2/3) |
| **D** | a processor; | At the beginning of the operation, the PC transfers the control program to the board from disc. It also transfers various standard parameters as explained below, and then starts the boards processor. (see page 2/1) |
| **E** | a memory; | Powerful features such as on-board memory and sophisticated DMA techniques begin to appear. (see page 2/1) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | A first connecting device is Inherit; the multiple-purpose interface is not specifically disclosed. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | A first connecting device is Inherit. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | Inherent. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | These early boards were quite basic—they handled analog to digital conversion… (see page 2/1) |
| **H** | wherein the interface device is configured by the processor and the memory | Inherent. |
| **H1** | to include a first command interpreter and a second command interpreter, | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Prior Art Reference |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Prior Art Reference |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Prior Art Reference |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Prior Art Reference |
|---|---|---|
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Prior Art Reference |
|---|---|---|
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A51

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Control unit (Figs. 1 and 2) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Mainframe (Figs. 1 and 2) |
| **C** | a data transmit/receive device, | Devices (Figs. 1 and 2) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | |
| **D** | a processor; | Shared microprocessor (Fig. 4) |
| **E** | a memory; | Printer buffer (Fig. 4) |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | Channel interface (Fig. 4) |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | Receiver (Fig. 4) |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | The control unit is configured to perform emulation of a standard I/O device (Standard Device Emulation, p. 72-74 and Fig. 4) |
| **H1** | to include a first command interpreter and a second command interpreter, | The control unit is configured to perform emulation of a standard I/O device (Standard Device Emulation, p. 72-74 and Fig. 4) |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | By emulating a standard I/O device, the control unit indicates to the mainframe that it is a standard I/O device |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | By emulating a standard I/O device, the control unit indicates to the mainframe that it is a standard I/O device |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device | By emulating a standard I/O device, the control unit indicates to the mainframe that it is a standard I/O device |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The chief advantage of emulating a standard I/O device is the ability to use IBM supported software that exists both in application programs and operating systems. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | Since the device can be a tape or DASD (see Figs. 1-3), commands inherently include transferring data to the mainframe. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| M* | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| N*1 | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| N*2 | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| N*3 | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| N*4 | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| B*2 | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |
| | | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Designing Control Units That Interface Peripherals to the IBM I/O Channel", Richard Keele, 1989. |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A52

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | Universal Serial bus (USB) |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | "Universal Serial bus (USB) is a communications architecture that gives a personal computer (PC) the ability to interconnect a variety of devices using a simple fourwire cable." (page 1, para 2, lines 1-3). "USB devices are segmented into device classes that … share a single class driver." (page 7, para 4.1, lines 1-3).<br>Thus, this document teaches that the PC has a multi-purpose interface for USB and class drivers. |
| **C** | a data transmit/receive device, | For example, a standard mouse device (page 2, lines 2-4) such as an optical mouse comprises an LED and an image sensor to sense the movement of the optical mouse. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | It was well known that the image sensor of the optical mouse provides analog data with respect to its movement. |
| **D** | a processor; | It was well known that the optical mouse comprises a microprocessor including a processor and a memory. |
| **E** | a memory; | It was well known that the optical mouse comprises a microprocessor including a processor and a memory. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The mouse inherently has a connecting device for interfacing with the personal computer. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The optical mouse inherently comprises a connecting portion between the microprocessor and the image sensor. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The optical mouse inherently comprises a sampling circuit and an A/D converter to convert the analog data provided by the image sensor into a digital signal to be processed by the microprocessor. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | The optical mouse inherently comprises a sampling circuit and an A/D converter to convert the analog data provided by the image sensor into a digital signal to be processed by the microprocessor. |
| **H** | wherein the interface device is configured by the processor and the memory | The optical mouse comprises the microprocessor including a processor and a memory. |
| **H1** | to include a first command interpreter and a second command interpreter, | The processor in the microprocessor. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | "The class type for a HID class device is defined by the Interface descriptor." (page 12)<br>"When a Get_Descriptor (Configuration) request is issued, it returns the Configuration descriptor, all Interface descriptors, all Endpoint descriptors, and the HID descriptor for each interface." (page 46, para 7.1, lines 2-4)<br>Thus, the USB-compliant device receives an inquiry as to its HID class and returns the HID class (interface descriptor) to which the USB-compliant device is classified. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | "When a Get_Descriptor (Configuration) request is issued, it returns the Configuration descriptor, all Interface descriptors, all Endpoint descriptors, and the HID descriptor for each interface." (page 46, para 7.1, lines 2-4)<br>Thus, the USB-compliant device receives an inquiry as to its HID class and returns the HID class (interface descriptor). The USB devices are segmented into the HID classes that have similar data transport requirements and share a single class driver (see page 7, para 4.1). Thus, the USB device returns the HID class to which it was classified, regardless of its real device type. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | For example, the mouse is classified to the "Keyboards and pointing devices" class (see page 2, lines 3-4). |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The personal computer communicates with the mouse by a class driver assigned to the HID class to which the mouse is classified (see page 7, para 4.1). |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | "Universal Serial bus (USB) is a communications architecture that gives a personal computer (PC) the ability to interconnect a variety of devices using a simple fourwire cable." (page 1, para 2, lines 1-3). "USB devices are segmented into device classes that … share a single class driver." (page 7, para 4.1, lines 1-3).<br>Thus, this document teaches that the PC has a multi-purpose interface for USB and class drivers. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The personal computer communicates with the mouse by a class driver assigned to the HID class to which the mouse is classified (see page 7, para 4.1). |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | It was well known that the memory in the microprocessor of the mouse functions as a buffer to buffer data to be transferred from the mouse to the personal computer. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The processor in the microprocessor processes the image digital signal. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| N*1 | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| N*2 | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| N*3 | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| N*4 | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| B*2 | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| Z* | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| B*3 | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | USB device classes include "Mass storage" in which a hard disk drive is classified (see page 1, para 2). Since a single device class share a single class driver, the personal computer has a driver for the "Mass storage." |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Device Class Definition for Human Interface Devices (HID)" version 1.0 - Final |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A53

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Personal Computer (Macintosh) has a SCSI and SCSI device drivers. |
| **C** | a data transmit/receive device, | SCSI devices such a scanner (Fig. 3-2, "peripheral devices") |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | For example, the scanner provides analog data of a scanned image. |
| **D** | a processor; | |
| **E** | a memory; | |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | |
| **H** | wherein the interface device is configured by the processor and the memory | |
| **H1** | to include a first command interpreter and a second command interpreter, | |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The personal computer communicates with the SCSI device by a corresponding SCSI driver. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Personal Computer (Macintosh) has a SCSI and SCSI device drivers. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The personal computer communicates with the SCSI device by a corresponding SCSI driver. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | The personal computer has a SCSI interface, and the SCSI device has a SCSI interface (Fig. 3-2). |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | The SCSI interface of the SCSI device comprises a partition map including a root directory and virtual files.<br>"Although the driver descriptor map and the partition map are not used by the SCSI Manager, they must be present on all block devices compatible with the Macintosh Operating System." (page 3)<br>"At an even higher level of abstraction, a device driver can define the mapping of physical addresses on a device to the logical addresses of a file system." (page 4) |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | The personal computer has a hard disk driver (Fig. 3-2) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The personal computer communicates with the SCSI devices by corresponding SCSI drivers including a hard disk driver. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The SCSI interface of the SCSI device comprises a partition map including a root directory and virtual files.<br>"Although the driver descriptor map and the partition map are not used by the SCSI Manager, they must be present on all block devices compatible with the Macintosh Operating System." (page 3)<br>"At an even higher level of abstraction, a device driver can define the mapping of physical addresses on a device to the logical addresses of a file system." (page 4) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | The SCSI interface of the SCSI device comprises a partition map including a root directory and virtual files.<br>"Although the driver descriptor map and the partition map are not used by the SCSI Manager, they must be present on all block devices compatible with the Macintosh Operating System." (page 3)<br>"At an even higher level of abstraction, a device driver can define the mapping of physical addresses on a device to the logical addresses of a file system." (page 4) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "July 1996 Apple article on SCSI drivers" |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The SCSI devices include a hard disk drive (Fig. 3-2). |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A54

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | A camera (page 3) is connected to the system. The camera inherently comprises an image sensor, a processing circuit for processing an image data provided by the image sensor, and an interface between the image sensor and the processing circuit. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Main CPU (mentioned in page 4) |
| **C** | a data transmit/receive device, | The camera (page 3) |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The image sensor of the camera provides analog image data. |
| **D** | a processor; | The camera inherently comprises a processor to process the image data and a memory to store the image data. |
| **E** | a memory; | The camera inherently comprises a processor to process the image data and a memory to store the image data. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The camera inherently comprises a connecting device interfacing with the Internet (page 3). |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The camera inherently comprises a connecting device interfacing with the image sensor. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The camera inherently comprises a sampling circuit and A/D converter to convert the image analog data provided by the image sensor into digital image data to transmit via the Internet. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | The camera inherently comprises a sampling circuit and A/D converter to convert the image analog data provided by the image sensor into digital image data to transmit via the Internet. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **H** | wherein the interface device is configured by the processor and the memory | The camera inherently comprises a processor to process the image data and a memory to store the image data. |
| **H1** | to include a first command interpreter and a second command interpreter, | The processor in the camera. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The memory of the camera buffers data to be transferred via the Internet. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The processor of the camera processes digital image data. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | "A derived virtual device (DVD) is an execution context at a network virtual device (NVD); i.e., a set of resources and procedures to access them." (page 7)<br>"STORM (STORage Manager) creates a DVD for client access to a file, mapping only the file blocks." (page 8)<br>"A DVD can be defined to map the blocks of a file, which the client can then treat like a raw device." (page 9) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | "A derived virtual device (DVD) is an execution context at a network virtual device (NVD); i.e., a set of resources and procedures to access them." (page 7)<br>"STORM (STORage Manager) creates a DVD for client access to a file, mapping only the file blocks." (page 8)<br>"A DVD can be defined to map the blocks of a file, which the client can then treat like a raw device." (page 9) |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | "A derived virtual device (DVD) is an execution context at a network virtual device (NVD); i.e., a set of resources and procedures to access them." (page 7)<br>"STORM (STORage Manager) creates a DVD for client access to a file, mapping only the file blocks." (page 8)<br>"A DVD can be defined to map the blocks of a file, which the client can then treat like a raw device." (page 9) |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | "Derived Virtual Devices: A Secure Distributed File System Mechanism" |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A55

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Casio QV-10 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The QV-10 camera includes an interface device that is formed by at least a portion of the CPU and the on-chip memory that are part of the camera. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | The QV-10 camera can be connected to, for example, a PC that utilizes drivers for a variety of input/output devices. The PC has at least a RS-232C port, which is a multi-purpose interface. See Pgs. 78 and 81 of the QV-10 Owner's Manual. |
| **C** | a data transmit/receive device, | The QV-10 camera includes a "data transmit/receive device" formed at least in part by a lens and a CCD chip. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The lens and CCD of QV-10 provide analog image data. |
| **D** | a processor; | The interface portion of the QV-10 camera inherently includes a processor. |
| **E** | a memory; | The interface portion of the QV-10 camera inherently includes an internal memory that is located on the camera. The internal memory forms at least a portion of the claimed "memory." |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The QV-10 camera includes a first connecting device comprising a RS-232C port for interfacing the interface device with a multipurpose RS-232C interface on a host PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Casio QV-10 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The QV-10 camera includes a second connecting device comprising a sampling circuit and an analog to digital converter. This circuitry interfaces analog data provided by a data transmit receive device (including the CCD image sensor) with the interface device. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See above |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See above. |
| **H** | wherein the interface device is configured by the processor and the memory | The interface device of the QV-10 camera is configured to include first and second command interpreters as set forth more fully below. |
| **H1** | to include a first command interpreter and a second command interpreter, | See above. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The first command interpreter may comprise, for example, a RS-232C command interpreter. When a QV-10 camera is plugged into a RS-232C port on a host PC, the camera may receive inquiry signals from the host to determine when something is operatively connected thereto. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | The QV-10 camera then sends a signal to the host PC, regardless of the image sensor, or other data transmit/receive device attached to the interface device, that causes the PC to recognize that it can communicate with the QV-10 by means of a software driver for a device that stores digital images. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | See above. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Casio QV-10 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer communicates with the QV-10 camera by means of the QV-10 driver software to allow the interface device to communicate with the PC. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | A user may use the interface provided by the driver software to view the images stored in the QV-10 camera's memory in a directory structure and retrieve the images files. See pgs. 15-21 of the QV-Link Owner's Manual. The QV-10 camera inherently includes a second command interpreter that is adapted to cause the processor of the QV-10 camera to interpret a data request command from the PC as being a command to initialize a transfer of digital data to the PC. The digital data can include digitized pictures. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 Claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The QV-10 camera can be connected to a PC has at least a RS-232C port, which is a multi-purpose interface. The PC therefore inherently contains a RS-232C driver. See Chapter 5 of QV-10 User's Manual titled "[u]sing the QV-10 camera with a PC." |
| **C** | a data transmit/receive device | See '399 Claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 Claim 1, row C1. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Casio QV-10 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 Claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 Claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 Claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 Claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 Claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 Claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 Claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The PC communicates with the QV-10 through the RS-232C interface by means of the RS-232C driver. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 Claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 Claim 1, row B. |
| **C** | a data transmit/receive device | See '399 Claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 Claim 1, row C1 |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Casio QV-10 |
|---|---|---|
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 Claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 Claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 Claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 Claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 Claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 Claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 Claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 Claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 Claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Casio QV-10 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The QV-10 camera includes internal memory. The internal memory comprises a buffer to buffer data acquired by the data transmit/receive device until it is transferred to the host PC. The QV-10 camera also comprises a memory buffer used during processing of images acquired by the image sensor. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an RS-232C interface and the first connecting device also comprises an RS-232C interface. | See '399 Claim 1, row B1. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The QV-10 inherently contains a digital signal processor to process digital image data. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Casio QV-10 |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an RS-232C interface, | See '399 Claim 1, row B1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Casio QV-10 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 Claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 Claim 1, row C. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 Claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 Claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 Claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The response signal contains information that, when received and processed by the PC, causes the PC to recognize that it can communicate with the interface device by means of a software driver for a device that stores digital images. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The QV-10 camera is adapted to utilize a software driver to allow the interface device to communicate with the PC. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The QV-10 camera is adapted to store pictures in a file system and a directory structure defined in its memory. The file system is "virtual" – the digitized pictures being representatives of images. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Casio QV-10 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 Claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 Claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 Claim 1, row C. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 Claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 Claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 Claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 Claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '449 Claim 1, row L2 |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Casio QV-10 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 Claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 Claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 Claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 Claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 Claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 Claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 Claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 Claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Casio QV-10 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Casio QV-10 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Casio QV-10 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | Images are stored in a data buffer, permitting time independence from when a photograph is captured and when it is transferred to the host PC. |

# Exhibit A56

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS200 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The DCS200 camera includes an interface device that is formed by at least a portion of the CPU and the on-chip memory that are part of the camera. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | The DCS200 camera can be connected to, for example, a PC that utilizes drivers for a variety of input/output devices. The PC has at least a SCSI port, which is a multi-purpose interface. See Chapter 5 of DCS200 User's Manual titled "[u]sing the DCS 200 camera with a PC" |
| **C** | a data transmit/receive device, | The DCS200 camera includes a "data transmit/receive device" formed at least in part by a lens and a CCD chip. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The lens and CCD of DCS200 provide analog image data. |
| **D** | a processor; | The interface portion of the DCS200 camera inherently includes a processor. |
| **E** | a memory; | The interface portion of the DCS200 camera inherently includes an internal memory that is located on the camera. The internal memory forms at least a portion of the claimed "memory." |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The DCS200 camera includes a first connecting device comprising a SCSI port for interfacing the interface device with a multipurpose SCSI interface on a host PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS200 |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The DCS200 camera includes a second connecting device comprising a sampling circuit and an analog to digital converter. This circuitry interfaces analog data provided by a data transmit receive device (including the CCD image sensor) with the interface device. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See above |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See above. |
| **H** | wherein the interface device is configured by the processor and the memory | The interface device of the DCS200 camera is configured to include first and second command interpreters as set forth more fully below. |
| **H1** | to include a first command interpreter and a second command interpreter, | See above. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The first command interpreter may comprise, for example, a SCSI command interpreter. When a DCS200 camera is plugged into a SCSI port on a host PC, the camera may receive inquiry signals from the host to determine when something is operatively connected thereto. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | The DCS200 camera then sends a signal to the host PC, regardless of the image sensor, or other data transmit/receive device attached to the interface device, that causes the PC to recognize that it can communicate with the DCS200 by means of a software driver for a device that stores digital images. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS200 |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device | See above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer communicates with the DCS200 camera by means of the DCS200 driver software to allow the interface device to communicate with the PC. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | A user may use the interface provided by the driver software to view the images stored in the DCS 200 camera's memory in a directory structure and retrieve the images files. See 5-29:32 of the DCS200 User's Manual. The DCS200 camera inherently includes a second command interpreter that is adapted to cause the processor of the DCS200 camera to interpret a data request command from the PC as being a command to initialize a transfer of digital data to the PC. The digital data can include digitized pictures. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 Claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The DCS200 camera can be connected to a PC has at least a SCSI port, which is a multi-purpose interface. The PC therefore inherently contains a SCSI driver. See Chapter 5 of DCS200 User's Manual titled "[u]sing the DCS 200 camera with a PC" |
| **C** | a data transmit/receive device | See '399 Claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 Claim 1, row C1. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS200 |
|---|---|---|
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 Claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 Claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 Claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 Claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 Claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 Claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 Claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The PC communicates with the DCS200 through the SCSI interface by means of the SCSI driver. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 Claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 Claim 1, row B. |
| **C** | a data transmit/receive device | See '399 Claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS200 |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 Claim 1, row C1 |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 Claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 Claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 Claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 Claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 Claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 Claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 Claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 Claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 Claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS200 |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The DCS200 camera includes internal memory. The internal memory comprises a buffer to buffer data acquired by the data transmit/receive device until it is transferred to the host PC. The DCS200 camera also comprises a memory buffer used during processing of images acquired by the image sensor. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | See '399 Claim 1, row B1. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The DCS200 inherently contains a digital signal processor to process digital image data. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS200 |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 Claim 1, row B1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS200 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 Claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 Claim 1, row C. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 Claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 Claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 Claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The response signal contains information that, when received and processed by the PC, causes the PC to recognize that it can communicate with the interface device by means of a software driver for a device that stores digital images. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The DCS 200 camera is adapted to utilize a software driver to allow the interface device to communicate with the PC. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The DCS200 camera is adapted to store pictures in a file system and a directory structure defined in its memory. The file system is "virtual" – the digitized pictures being representatives of images. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS200 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 Claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 Claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 Claim 1, row C. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 Claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 Claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 Claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 Claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '449 Claim 1, row L2 |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS200 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 Claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 Claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 Claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 Claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 Claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 Claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 Claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 Claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS200 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS200 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS200 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | Images are stored in a data buffer, permitting time independence from when a photograph is captured and when it is transferred to the host PC. |

# Exhibit A57

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DC25 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The DC25 camera includes an interface device that is formed by at least a portion of the CPU and the on-chip memory that are part of the camera. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | The DC25 camera can be connected to, for example, a PC that utilizes drivers for a variety of input/output devices. The PC has at least a serial port, which is a multi-purpose interface. See Chapter 3 of DC25 User's Guide. |
| **C** | a data transmit/receive device, | The DC25 camera includes a "data transmit/receive device" formed at least in part by a lens and a CCD chip. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The lens and CCD of DC25 provide analog image data. |
| **D** | a processor; | The interface portion of the DC25 camera inherently includes a processor. |
| **E** | a memory; | The interface portion of the DC25 camera inherently includes an internal memory that is located on the camera. The internal memory forms at least a portion of the claimed "memory." |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The DC25 camera includes a first connecting device comprising a serial port for interfacing the interface device with a multipurpose serial port on a host PC. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The DC25 camera includes a second connecting device comprising a sampling circuit and an analog to digital converter. This circuitry interfaces analog data provided by a data transmit receive device (including the CCD image sensor) with the interface device. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DC25 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See above |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See above. |
| **H** | wherein the interface device is configured by the processor and the memory | The interface device of the DC25 camera is configured to include first and second command interpreters as set forth more fully below. |
| **H1** | to include a first command interpreter and a second command interpreter, | See above. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The first command interpreter may comprise, for example, a serial port command interpreter. When a DC25 camera is plugged into a serial port on a host PC, the camera may receive inquiry signals from the host to determine when something is operatively connected thereto. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | The DC25 camera then sends a signal to the host PC, regardless of the image sensor, or other data transmit/receive device attached to the interface device, that causes the PC to recognize that it can communicate with the DC25 by means of a software driver for a device that stores digital images. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | See above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer communicates with the DC25 camera by means of the DC25 driver software to allow the interface device to communicate with the PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DC25 |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | A user may use the interface provided by the driver software to view the images stored in the DC25 camera's memory in a directory structure and retrieve the images files. See 4-3:4 of the DC25 User's Guide. The DC25 camera inherently includes a second command interpreter that is adapted to cause the processor of the DC25 camera to interpret a data request command from the PC as being a command to initialize a transfer of digital data to the PC. The digital data can include digitized pictures. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 Claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The DC25 camera can be connected to a PC has at least a serial port, which is a multi-purpose interface. The PC therefore inherently contains a serial port driver. See Chapter 3 of DC25 User's Guide. |
| **C** | a data transmit/receive device | See '399 Claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 Claim 1, row C1. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 Claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 Claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 Claim 1, row G2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DC25 |
|---|---|---|
| **H** | where the interface device is configured using the processor and the memory | See '399 Claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 Claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 Claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 Claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The PC communicates with the DC25 through the serial interface by means of the serial port driver. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 Claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 Claim 1, row B. |
| **C** | a data transmit/receive device | See '399 Claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 Claim 1, row C1 |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 Claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 Claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 Claim 1, row G1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DC25 |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 Claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 Claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 Claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 Claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 Claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 Claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The DC25 camera includes internal memory. The internal memory comprises a buffer to buffer data acquired by the data transmit/receive device until it is transferred to the host PC. The DC25 camera also comprises a memory buffer used during processing of images acquired by the image sensor. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SERIAL interface and the first connecting device also comprises an SERIAL interface. | See '399 Claim 1, row B1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DC25 |
|---|---|---|
| D* | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The DC25 inherently contains a digital signal processor to process digital image data. |
| M* | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| N*1 | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| N*2 | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| N*3 | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| N*4 | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| B*2 | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DC25 |
|---|---|---|
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SERIAL interface, | See '399 Claim 1, row B1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DC25 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 Claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 Claim 1, row C. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 Claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 Claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 Claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The response signal contains information that, when received and processed by the PC, causes the PC to recognize that it can communicate with the interface device by means of a software driver for a device that stores digital images. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The DC25 camera is adapted to utilize a software driver to allow the interface device to communicate with the PC. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The DC25 camera is adapted to store pictures in a file system and a directory structure defined in its memory. The file system is "virtual" – the digitized pictures being representatives of images. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DC25 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 Claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 Claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 Claim 1, row C. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 Claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 Claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 Claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 Claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '449 Claim 1, row L2 |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DC25 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 Claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 Claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 Claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 Claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 Claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 Claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 Claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 Claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DC25 |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DC25 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DC25 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | Images are stored in a data buffer, permitting time independence from when a photograph is captured and when it is transferred to the host PC. |

# Exhibit A58

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The DCS Cameras include an interface device that is formed by at least a portion of the CPU and the on-chip memory that are part of the camera. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | The DCS Cameras can be connected to, for example, a PC that utilizes drivers for a variety of input/output devices. The PC has at least a SCSI port, which is a multi-purpose interface. See Chapter 4 of DCS1, DCS 3, DCS5 User's Manual titled "[p]reparing the camera and the computer" |
| **C** | a data transmit/receive device, | The DCS Cameras includes a "data transmit/receive device" formed at least in part by a lens and a CCD chip. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The lens and CCD of the DCS Cameras provide analog image data. |
| **D** | a processor; | The interface portion of the DCS Cameras inherently includes a processor. |
| **E** | a memory; | The interface portion of the DCS Cameras inherently includes an internal memory that is located on the camera. The internal memory forms at least a portion of the claimed "memory." |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The DCS Cameras include a first connecting device comprising a SCSI port for interfacing the interface device with a multipurpose SCSI interface on a host PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The DCS Cameras include a second connecting device comprising a sampling circuit and an analog to digital converter. This circuitry interfaces analog data provided by a data transmit receive device (including the CCD image sensor) with the interface device. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See above |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See above. |
| **H** | wherein the interface device is configured by the processor and the memory | The interface device of the DCS Cameras is configured to include first and second command interpreters as set forth more fully below. |
| **H1** | to include a first command interpreter and a second command interpreter, | See above. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The first command interpreter may comprise, for example, a SCSI command interpreter. When a DCS Camera is plugged into a SCSI port on a host PC, the camera may receive inquiry signals from the host to determine when something is operatively connected thereto. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | The DCS Camera then sends a signal to the host PC, regardless of the image sensor, or other data transmit/receive device attached to the interface device, that causes the PC to recognize that it can communicate with the DCS Camera by means of a software driver for a device that stores digital images. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **K1** | which signals to the host device that it is an input/output device customary in a host device | See above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | The computer communicates with the DCS Cameras by means of the DCS camera driver software to allow the interface device to communicate with the PC. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | A user may use the interface provided by the driver software to view the images stored in the DCS Camera's memory in a directory structure and retrieve the images files. See 6-3:8 of the DCS Cameras' User's Manual. The DCS Cameras inherently includes a second command interpreter that is adapted to cause the processor of the DCS Cameras to interpret a data request command from the PC as being a command to initialize a transfer of digital data to the PC. The digital data can include digitized pictures. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 Claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The DCS Cameras can be connected to a PC has at least a SCSI port, which is a multi-purpose interface. The PC therefore inherently contains a SCSI driver. See Chapter 4 of DCS Cameras' User's Manual. |
| **C** | a data transmit/receive device | See '399 Claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 Claim 1, row C1. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 Claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 Claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 Claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 Claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 Claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 Claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 Claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The PC communicates with the DCS Cameras through the SCSI interface by means of the SCSI driver. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 Claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 Claim 1, row B. |
| **C** | a data transmit/receive device | See '399 Claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 Claim 1, row C1 |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 Claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 Claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 Claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 Claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 Claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 Claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 Claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 Claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 Claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The DCS Cameras include internal memory. The internal memory comprises a buffer to buffer data acquired by the data transmit/receive device until it is transferred to the host PC. The DCS Cameras also comprise a memory buffer used during processing of images acquired by the image sensor. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | See '399 Claim 1, row B1. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The DCS Cameras inherently contain a digital signal processor to process digital image data. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 Claim 1, row B1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 Claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 Claim 1, row C. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 Claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 Claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 Claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The response signal contains information that, when received and processed by the PC, causes the PC to recognize that it can communicate with the interface device by means of a software driver for a device that stores digital images. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | The DCS Cameras are adapted to utilize a software driver to allow the interface device to communicate with the PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The DCS Cameras are adapted to store pictures in a file system and a directory structure defined in its memory. The file system is "virtual" – the digitized pictures being representatives of images. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 Claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 Claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 Claim 1, row C. |
| **D** | a processor; | See '399 Claim 1, row D. |
| **E** | a memory; | See '399 Claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 Claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 Claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 Claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 Claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 Claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 Claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '449 Claim 1, row L2 |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 Claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 Claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 Claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 Claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 Claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 Claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 Claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 Claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 Claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Kodak DCS1, DCS 3, DCS 5 Collectively the "DCS Cameras" |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | Images are stored in a data buffer, permitting time independence from when a photograph is captured and when it is transferred to the host PC. |

# Exhibit A59

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Quadra + PowerBook |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | PowerBook 180 ("PowerBook") |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Quadra 700 ("Quadra")<br>Quadra has an internal HDD and a driver for the internal HDD (see Exhibit D, page 6) and a SCSI Manager (See Exhibit C, page 1-4). Further, Quadra 700 has a SCSI interface (see Exhibit D, page 6). |
| **C** | a data transmit/receive device, | A monaural microphone, a stereo tape deck and a stereo microphone can be connected to the PowerBook (see Exhibit I, page 658-661). |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The monaural microphone, the stereo tape deck and the stereo microphone provide analog data to the PowerBook (Exhibit E; Exhibit G, page 19; Exhibit B, page 25). |
| **D** | a processor; | The PowerBook has a CPU (see Exhibit G, page 4). |
| **E** | a memory; | The PowerBook has a PSRAM (see Exhibit G, page 4). |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The PowerBook has an External SCSI port (see Exhibit G, page 4). The PowerBook has a SCSI Disk Mode, in which the PowerBook is connected to the Quadra through the SCSI port, and can be used as an external HDD for the Quadra (Exhibit B, page 224; Exhibit G, page 7). |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | A microphone and MacRecorder can be connected to the PowerBook (see Exhibit E, page 44-45; Exhibit I, page 660-662). |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | The MacRecorder includes a sampling circuit to sample the analog data provided by using the MacRecorder (see Exhibit E, page 48; Exhibit I, page 658-660). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Quadra + PowerBook |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | The MacRecorder is a digitizer for recording and storing the sound data in the digital form (see Exhibit I, page 660-662). |
| **H** | wherein the interface device is configured by the processor and the memory | An interface comprises the processor and the memory (see Exhibit D, page 6). |
| **H1** | to include a first command interpreter and a second command interpreter, | The processor in the PowerBook. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The processor in the PowerBook executes the SCSI Disk Mode. The SCSI Manager in the Quadra sends an INQUIRY command, which all SCSI devices must support, to obtain the target's device type (see Exhibit C, page 3-18, lines 6-8; Exhibit F, page 127, the right column). |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | The PowerBook receives the SCSI INQUIRY command from the Quadra with respect to the SCSI device type of the PowerBook and replies information representing "this device is a hard-disk for the Quadra," although PowerBook is a computer (see Exhibit F, page 128, the right column "device type code"; Exhibit G, page 7 "SCSI Disk Mode"). |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | The PowerBook receives the SCSI INQUIRY command from the Quadra with respect to the SCSI device type of the PowerBook and replies information representing "this device is a hard-disk for the Quadra," although PowerBook is a computer (see Exhibit F, page 128, the right column "device type code"; Exhibit G, page 7 "SCSI Disk Mode"). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Quadra + PowerBook |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "[The SCSI] mode allows the computer to act like an external hard disk when attached to another Macintosh." (Exhibit G, page 7 "SCSI Disk Mode"; Exhibit B, page 224)<br>"SCSI device drivers do not control SCSI hardware directly; they use the SCSI Manager to communicate with SCSI devices." (Exhibit C, page 3-9, lines 3-5). That is, the SCSI Manager functions as a driver for the SCSI hardware connected to the SCSI interface.<br>The Quadra uses the SCSI Manager to assess the hard disk in the PowerBook. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | "[The SCSI] mode allows the computer to act like an external hard disk when attached to another Macintosh." (Exhibit G, page 7 "SCSI Disk Mode"; Exhibit B, page 224) |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Quadra 700 ("Quadra") has a SCSI interface and a SCSI Manager (See Exhibit C, page 1-4; Exhibit D, page 6). |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Quadra + PowerBook |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | "[The SCSI] mode allows the computer to act like an external hard disk when attached to another Macintosh." (Exhibit G, page 7 "SCSI Disk Mode"; Exhibit B, page 224)<br>"SCSI device drivers do not control SCSI hardware directly; they use the SCSI Manager to communicate with SCSI devices." (Exhibit C, page 3-9, lines 3-5). That is, the SCSI Manager functions as a driver for the SCSI hardware connected to the SCSI interface.<br>The Quadra uses the SCSI Manager to assess the hard disk in the PowerBook. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Quadra + PowerBook |
|---|---|---|
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Quadra + PowerBook |
|---|---|---|
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | "[The SCSI] mode allows the computer to act like an external hard disk when attached to another Macintosh." (Exhibit G, page 7 "SCSI Disk Mode"; Exhibit B, page 224)<br>"SCSI device drivers do not control SCSI hardware directly; they use the SCSI Manager to communicate with SCSI devices." (Exhibit C, page 3-9, lines 3-5). That is, the SCSI Manager functions as a hard disk driver.<br>The PowerBook receives the SCSI INQUIRY command from the Quadra with respect to the SCSI device type of the PowerBook and replies information representing "this device is a hard-disk for the Quadra," although PowerBook is a computer (see Exhibit F, page 128, the right column "device type code"; Exhibit G, page 7 "SCSI Disk Mode"). |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The PSRAM in the PowerBook functions as a buffer between the peripheral devices (such as the microphone and MacRecorders) and the Quadra. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | Further, Quadra 700 has a SCSI interface (see Exhibit D, page 6).<br>The PowerBook has an External SCSI port (see Exhibit G, page 4). |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The PowerBook has a CPU (see Exhibit G, page 4). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Quadra + PowerBook |
|---|---|---|
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | "[The SCSI] mode allows the computer to act like an external hard disk when attached to another Macintosh." (Exhibit G, page 7 "SCSI Disk Mode"; Exhibit B, page 224)<br>Therefore, the transmitted data is formatted in a suitable format for the hard disk present in the Quadra. |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | Quadra + PowerBook |
|---|---|---|
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | "[The SCSI] mode allows the computer to act like an external hard disk when attached to another Macintosh." (Exhibit G, page 7 "SCSI Disk Mode"; Exhibit B, page 224)<br>"SCSI device drivers do not control SCSI hardware directly; they use the SCSI Manager to communicate with SCSI devices." (Exhibit C, page 3-9, lines 3-5). That is, the SCSI Manager functions as a driver for the SCSI hardware connected to the SCSI interface.<br>The Quadra uses the SCSI Manager to assess the hard disk in the PowerBook. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Quadra + PowerBook |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | The PowerBook receives the SCSI INQUIRY command from the Quadra with respect to the SCSI device type of the PowerBook and replies information representing "this device is a hard-disk for the Quadra," although PowerBook is a computer (see Exhibit F, page 128, the right column "device type code"; Exhibit G, page 7 "SCSI Disk Mode"). |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Quadra + PowerBook |
|---|---|---|
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | "[The SCSI] mode allows the computer to act like an external hard disk when attached to another Macintosh." (Exhibit G, page 7 "SCSI Disk Mode"; Exhibit B, page 224)<br>"SCSI device drivers do not control SCSI hardware directly; they use the SCSI Manager to communicate with SCSI devices." (Exhibit C, page 3-9, lines 3-5). That is, the SCSI Manager functions as a driver for the SCSI hardware connected to the SCSI interface.<br>The Quadra uses the SCSI Manager to assess the hard disk in the PowerBook. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Quadra + PowerBook |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Quadra + PowerBook |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Quadra + PowerBook |
|---|---|---|
| N*2 | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| N*6 | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| N*7 | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| N*8 | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| N*9 | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| N*10 | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| N*11 | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Quadra + PowerBook |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | "[The SCSI] mode allows the computer to act like an external hard disk when attached to another Macintosh." (Exhibit G, page 7 "SCSI Disk Mode"; Exhibit B, page 224)<br>Therefore, the transmitted data is formatted into blocks having a predetermined size suitable for the internal hard disk of the Quadra. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Quadra + PowerBook |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | The PowerBook replies to the Quadra information representing "this device is a hard-disk for the Quadra." (see Exhibit F, page 128, the right column "device type code"; Exhibit G, page 7 "SCSI Disk Mode"). |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A60

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DeskLab |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." *See* Digital Equipment Corp., *TRI/+ Program Shippable Products Catalog*, Rev. 18.0 (Oct. 1992) ("DEC Catalog") at p. 23. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Workstation, including SCSI drivers and interface. DEC Catalog at p. 23. |
| **C** | a data transmit/receive device, | Devices for "speech processing, acoustics, psycoacoustics, engineering and similar areas." DEC Catalog at p. 23. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The devices provide "real-time analog data." DEC Catalog at p. 23. |
| **D** | a processor; | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." DEC Catalog at p. 23. |
| **E** | a memory; | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." DEC Catalog at p. 23. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | "Parallel and serial ports are included for integrating with existing equipment." DEC Catalog at p. 23. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DeskLab |
|---|---|---|
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." DEC Catalog at p. 23. |
| **H** | wherein the interface device is configured by the processor and the memory | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." DEC Catalog at p. 23. |
| **H1** | to include a first command interpreter and a second command interpreter, | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." DEC Catalog at p. 23. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DeskLab |
|---|---|---|
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DeskLab |
|---|---|---|
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DeskLab |
|---|---|---|
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." DEC Catalog at p. 23. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | "DeskLab is a complete hardware/software solution for workstation real-time data acquisition." DEC Catalog at p. 23. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | "DeskLab is a complete hardware/software solution for workstation real-time analog data acquisition. DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DeskLab |
|---|---|---|
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DeskLab |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | "DeskLab is a complete hardware/software solution for workstation real-time analog data acquisition. DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DeskLab |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | "DeskLab is a complete hardware/software solution for workstation real-time analog data acquisition. DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DeskLab |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DeskLab |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DeskLab |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DeskLab |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A61

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DASM-AD14 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | "The DASM-AD14 is a 14-bit, 2 MHz sampling analog-to-digital (A/D) converter subsystem that attaches to the workstation's SCSI port." *See* Digital Equipment Corp., *TRI/+ Program Shippable Products Catalog*, Rev. 18.0 (Oct. 1992) ("DEC Catalog") at p. 23. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | Workstation, including SCSI drivers and interface. DEC Catalog at p. 23. |
| **C** | a data transmit/receive device, | Any device producing "+/- 5 v analog signals." DEC Catalog at p. 23. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The device provides "+/- 5 v analog signals." DEC Catalog at p. 23. |
| **D** | a processor; | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **E** | a memory; | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | "The DASM-AD14 is a 14-bit, 2 MHz sampling analog-to-digital (A/D) converter subsystem that attaches to the workstation's SCSI port." *See* DEC Catalog at p. 23. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | "The DASM-AD14 is a 14-bit, 2 MHz sampling analog-to-digital (A/D) converter subsystem that attaches to the workstation's SCSI port." *See* DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DASM-AD14 |
|---|---|---|
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | "The DASM-AD14 is a 14-bit, 2 MHz sampling analog-to-digital (A/D) converter subsystem that attaches to the workstation's SCSI port." *See* DEC Catalog at p. 23. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | "The DASM-AD14 is a 14-bit, 2 MHz sampling analog-to-digital (A/D) converter subsystem that attaches to the workstation's SCSI port." *See* DEC Catalog at p. 23. |
| **H** | wherein the interface device is configured by the processor and the memory | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **H1** | to include a first command interpreter and a second command interpreter, | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DASM-AD14 |
|---|---|---|
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | Workstation, including SCSI drivers and interface. DEC Catalog at p. 23. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DASM-AD14 |
|---|---|---|
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DASM-AD14 |
|---|---|---|
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DASM-AD14 |
|---|---|---|
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | DASM-AD14 |
|---|---|---|
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | "DeskLab installs exactly like a SCSI disk without special drivers." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DASM-AD14 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DASM-AD14 |
|---|---|---|
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DASM-AD14 |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DASM-AD14 |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DASM-AD14 |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DASM-AD14 |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | DASM-AD14 |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | "The DASM-AD14 digitizes +/- 5 v analog signals and buffers the data in up to 8 Mbytes of internal memory that appears to the host as a SCSI disk drive." DEC Catalog at p. 23. |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |

# Exhibit A62

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | HP PhotoSmart Camera C5340 |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | The HP PhotoSmart Camera provides an interface between a PC or Macintosh computer and camera elements, such as a storage card which stores images taken from a lens-CCD assembly. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | The HP PhotoSmart Camera interfaces with a PC or Macintosh computer via an RS-232 interface using standard Windows 95 drivers. |
| **C** | a data transmit/receive device, | The HP PhotoSmart Camera includes a CCD image sensor and associated electronics for capturing images. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | The CCD sensor captures analog data. |
| **D** | a processor; | The interface portion of the HP PhotoSmart Camera typically has a processor such as a microprocessor or microcontroller. |
| **E** | a memory; | The interface portion of the HP PhotoSmart Camera typically includes a memory. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | The HP PhotoSmart Camera includes a first connecting device comprising an RS-232 serial port circuit for interfacing the device with a multipurpose RS-232 serial port on the host PC. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | The HP PhotoSmart Camera includes a second connecting device comprising a sample and hold circuit and an analog to digital converter. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399, Claim 1, Row G. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399, Claim 1, Row G. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | HP PhotoSmart Camera C5340 |
|---|---|---|
| **H** | wherein the interface device is configured by the processor and the memory | The interface device fo the HP PhotoSmart Digital Camera is configured to include first and second command interpreters as set forth more fully below. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399, Claim 1, Row H. |
| **I** | wherein the first command interpreter is configured in such a way that the command interpreter, when receiving an inquiry from the host device as to a type of a device attached to the multi-purpose interface of the host device | The first command interpreter may comprise, for example, a serial bus command interpreter. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | The HP PhotoSmart Camera communicates with the host using the standard RS-232 port and Windows 95 drivers. Additionally, the Camera may use standard TWAIN API drivers for interfacing with applications. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device | See J above. |
| **L1** | whereupon the host device communicates with the interface device by means of the driver for the input/output device customary in a host device, and | See J above. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | The second command interpreter is configured to interpret data request commands generated using standard Windows 95 or TWAIN protocols sent via the RS-232 port. |
| **A** | **Independent claim 11**:<br>11. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, and | The HP PhotoSmart Camera communicates with the host using the standard RS-232 port and Windows 95 drivers. Additionally, the Camera may use standard TWAIN API drivers for interfacing with applications. |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, comprising: | See '399 claim 1, row C1. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | HP PhotoSmart Camera C5340 |
|---|---|---|
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data, | See '399 claim 1, row G2. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **H1** | to include a first command interpreter and a second command interpreter, | See '399 claim 1, row H1. |
| **I** | wherein the first command interpreter is configured in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device, | See '399 claim 1, row J. |
| **K1** | which signals to the host device that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | The HP PhotoSmart Camera communicates with the host using the standard RS-232 port and Windows 95 drivers. Additionally, the Camera may use standard TWAIN API drivers for interfacing with applications. |
| **M** | wherein the second command interpreter is configured to interpret a data request command from the host device to the type of input/output device signaled by the first command interpreter as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | HP PhotoSmart Camera C5340 |
|---|---|---|
| **A** | **Independent Claim 14**:<br>14. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1 |
| **C** | a data transmit/receive device | See '399 claim 1, row C. |
| **C1** | the data transmit/receive device being arranged for providing analog data, via an interface device, comprising: | See '399 claim 1, row C1. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device, the second connecting device including | See '399 claim 1, row G. |
| **G1** | a sampling circuit for sampling the analog data provided by the data/transmit/receive device and | See '399 claim 1, row G1. |
| **G2** | an analog-to-digital converter for converting data sampled by the sampling circuit into digital data; | See '399 claim 1, row G2. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive data attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K1** | in such a way that it is an input/output device customary in a host device, | See '399 claim 1, row K1. |
| **L1** | whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and | See '399 claim 1, row L1. |
| **M** | interpreting a data request command from the host device to the type of input/output device customary in the host device as a data transfer command for initiating a transfer of the digital data to the host device. | See '399 claim 1, row M. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | HP PhotoSmart Camera C5340 |
|---|---|---|
| **B*1** | **Dependent Claim 2**:<br>2. An interface device according to claim 1, wherein the drivers for input/output drivers customary in a host device comprise a hard disk driver, and the signal indicates to the host device that the host device is communicating with a hard disk. | The HP PhotoSmart Camera communicates with the host using the standard RS-232 port and Windows 95 drivers. Additionally, the Camera may use standard TWAIN API drivers for interfacing with applications. |
| **E*** | **Dependent Claim 3**:<br>3. An interface device according to claim 1, wherein the memory means comprises a buffer to buffer data to be transferred between the data transmit/receive device and the host device. | The HP PhotoSmart Camera includes internal memory and structure for receiving a memory card. The internal memory and/or memory card comprise a buffer to buffer data acquired by the transmit/receive device until it is transferred to the host PC. The HP PhotoSmart Camera may also comprise a memory buffer used during processing of images acquired by the image sensor. |
| **Z*** | **Dependent Claim 4**:<br>4. An interface device according to claim 1, wherein the multi-purpose interface of the host device is an SCSI interface and the first connecting device also comprises an SCSI interface. | The HP PhotoSmart Camera communicates with the host using the standard RS-232 port or RS-422 port and standard Windows 95 drivers. It may also use the standard TWAIN API drivers. |
| **D*** | **Dependent Claim 5**:<br>5. An interface device according to claim 1, wherein the processor is a digital signal processor. | The HP PhotoSmart Camera includes a DSP. |
| **M*** | **Dependent Claim 6**:<br>6. An interface device according to claim 2, wherein the data to be transferred from the data transmit/receive device to the host device in the interface device is formatted in a suitable format for a hard disk present in the host device. | |
| **N*1** | **Dependent Claim 7**:<br>7. An interface device according to claim 2, which further comprises a root directory and virtual files which are present on the signaled hard disk drive and which can be accessed from the host device. | The HP PhotoSmart Camera has a memory device including a file structure and files that may be read by the host PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,470,399's Claim Language | HP PhotoSmart Camera C5340 |
|---|---|---|
| **N*2** | **Dependent Claim 8**:<br>8. An interface device according to claim 7, wherein the virtual files comprise a configuration file in text format which are stored in the memory means and using which the user can configure the interface device for a specific data transmit/receive device. | |
| **N*3** | **Dependent Claim 9**:<br>9. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the microprocessor means which are stored in the interface device in order to perform data processing, independently of the host device, of data received via the second connecting device. | |
| **N*4** | **Dependent Claim 10**:<br>10. An interface device according to claim 7, wherein the virtual files comprise batch files or executable files for the host device which are stored in the interface device. | |
| **B*2** | **Dependent Claim 12**:<br>12. An interface device according to claim 11, wherein in addition to the first connecting device of the interface device, there is a further input/output device at the multi-purpose interface of the host device, and wherein the interface device can communicate directly with said further input/output device via the specific driver for the multi-purpose interface. | |
| **Z*** | **Dependent Claim 13**:<br>13. An interface device according to claim 11, wherein the multi-purpose interface is an SCSI interface, | See '399 claim 4, row Z1. |
| **B*3** | and wherein the specific driver for the multi-purpose interface is an ASPI manager. | |
| **B*1** | **Dependent Claim 15**:<br>15. A method according to claim 14, wherein the drivers for input/output devices customary in a host device comprise a driver for a storage device and in particular for a hard disk drive. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **A** | **Independent Claim 1**:<br>1. An interface device for communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and | See '399 claim 1, row B1. |
| **C** | a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | wherein the interface device is configured by the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached to the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | |
| **L2** | whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and | |
| **N1** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure. | The HP PhotoSmart Camera includes a memory with a file structure that stores image files which may be accesses by the host PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **A** | **Independent claim 17**:<br>17. An interface device for communication between | See '399 claim 1, row A. |
| **B2** | a host device, which comprises a multi-purpose interface and a specific driver for this interface, | See '399 claim 11, row B2. |
| **C** | and a data transmit/receive device comprising the following features: | See '399 claim 1, row C. |
| **D** | a processor; | See '399 claim 1, row D. |
| **E** | a memory; | See '399 claim 1, row E. |
| **F** | a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and | See '399 claim 1, row F. |
| **G** | a second connecting device for interfacing the interface device with the data transmit/receive device, | See '399 claim 1, row G. |
| **H** | where the interface device is configured using the processor and the memory | See '399 claim 1, row H. |
| **I** | in such a way that the interface device, when receiving an inquiry from the host device as to the type of a device attached at the multi-purpose interface of the host device, | See '399 claim 1, row I. |
| **J** | sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device | See '399 claim 1, row J. |
| **K2** | which signals to the host device that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L3** | whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and | See '399 claim 11, row L3. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | The HP PhotoSmart Camera includes a memory with a file structure that stores image files which may be accessesd by the host PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **A** | **Independent Claim 18**:<br>18. A method of communication between | See '399 claim 1, row A. |
| **B1** | a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, | See '399 claim 1, row B1. |
| **C** | and a data transmit/receive device via an interface device comprising the following steps: | See '399 claim 1, row C. |
| **F** | interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; | See '399 claim 1, row F. |
| **G** | interfacing of the data transmit/receive device with a second connecting device of the interface device; | See '399 claim 1, row G. |
| **I** | inquiring by the host device at the interface device as to the type of device to which the multi-purpose interface of the host device is attached; | See '399 claim 1, row I. |
| **J** | regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, responding to the inquiry from the host device by the interface device | See '399 claim 1, row J. |
| **K2** | in such a way that it is a storage device customary in a host device, | See '449 claim 1, row K2. |
| **L2** | whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and | See '449 claim 1, row L2. |
| **N2** | wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a file allocation table and a directory structure. | See '449 claim 17, row N2. |
| **N*5** | **Dependent Claim 2**:<br>2. An interface device in accordance with claim 1, in which the directory structure has a configuration file for setting and controlling functions of the interface device or an executable or a batch file for conducting a routine stored in the memory or a data file used for transferring data from the data transmit/receive device to the host device or a help file for giving help on handling the interface device. | |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **N*2** | **Dependent Claim 3**:<br>3. An interface device in accordance with claim 2 wherein the configuration file is a text file. | |
| **N*6** | **Dependent Claim 4**:<br>4. An interface device in accordance with claim 2 wherein the executable file includes a Fast Fourier Transform routine for transforming data acquired by the second connecting device into the frequency domain and for examining frequency domain data. | |
| **N*7** | **Dependent Claim 5**:<br>5. An interface device in accordance with claim 2 wherein the executable file includes a data compression routine for compressing data to be transmitted from the data transmit/receive device to the host device. | |
| **N*8** | **Dependent Claim 6**:<br>6. An interface device in accordance with claim 1 wherein, in response to a request from the host to read a boot sequence, the processor is arranged to send a virtual boot sequence to the host. | |
| **N*9** | **Dependent Claim 7**:<br>7. An interface device in accordance with claim 6 wherein the virtual boot sequence includes a starting position and a length of a file allocation table, an indication of a type of the storage device or a number of sectors of the storage device. | |
| **N*10** | **Dependent Claim 8**:<br>8. An interface device in accordance with claim 7 wherein, in response to a request from the host to display a directory of the storage device, a processor is arranged for transferring the file allocation table and the directory structure to the host. | The HP PhotoSmart Camera includes a memory with a file structure that stores image files which may be accessed by the host PC. |
| **N*11** | **Dependent Claim 9**:<br>9. An interface device in accordance with claim 1 wherein the file allocation table and the directory structure is transferred to the host in response to a request from the host to read data from or store data to the storage device. | The HP PhotoSmart Camera includes a memory with a file structure that stores image files which may be accessed by the host PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| N*12 | **Dependent Claim 10**:<br>10. An interface device in accordance with claim 1 wherein the directory structure includes a data file for transferring data from the data transmit/receive device to the host device wherein the processor is arranged to interpret a request from the host to read the data file as a request for a data transfer from the data transmit/receive device to the host, so that data is transmitted from the second connecting device to the first connecting device and to the host. | |
| N*13 | **Dependent Claim 11**:<br>11. An interface device in accordance with claim 10 wherein the directory structure further includes a configuration file for specifying a time period for a measurement by the data transmit/receive device, wherein the interface device is arranged for simulating a length of the data file to the host that corresponds to an anticipated volume of data produced by the data transmit/receive device in the specified time period. | |
| N*14 | **Dependent Claim 12**:<br>12. An interface device in accordance with claim 1 wherein the file allocation table includes information on numbers of blocks occupied by the data file wherein the interface device is arranged for receiving block numbers or a block number range from the host when the host wants to read the data file, and wherein the interface device is arranged to start a data transfer to the host, when the block numbers or the block number range is received from the host. | |
| N*15 | **Dependent Claim 13**:<br>13. An interface device in accordance with claim 12 wherein the processor is arranged for formatting the data acquired by the second connecting device into blocks having a predetermined size, the predetermined size being suited for the storage device. | The HP PhotoSmart Camera includes a memory with a file structure that stores image files which may be accessed by the host PC. |

**PRIOR ART CLAIM CHART**

| Code | USP 6,895,449's Claim Language | Prior Art Reference |
|---|---|---|
| **Y*** | **Dependent Claim 14**:<br>14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device. | |
| **K2*** | **Dependent Claim 15:**<br>15. An interface device in accordance with claim 1 wherein the storage device is a hard disk. | |
| **E*** | **Dependent Claim 16:**<br>6. An interface device in accordance with claim 1 wherein the memory has a data buffer for permitting independence in terms of time of the data transmit/receive device attachable to the second connecting device from the host device attachable to the first connecting device. | See '399 claim 3, row E*. |