

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

IN RE PAPST LICENSING GMBH & CO.
KG LITIGATION

This Document Relates To:
All Cases

Misc. Action No. 07-493 (RMC)

MDL Docket No. 1880

**PAPST’S REPLY MEMORANDUM IN SUPPORT OF THE NEED FOR EXPERT
TESTIMONY IN THE COURT’S CLAIM INTERPRETATION PROCESS**

In response to the Camera Manufacturers’ Memorandum Regarding Expert Testimony In The Court’s Claim Interpretation Process, Papst provides the following reply memorandum in support of its request that expert testimony be part of this Court’s claim interpretation process.

In their Memorandum, the Camera Manufacturers readily concede that expert testimony could very well be necessary to this Court’s claim interpretation process. They do not object to the use of expert declarations in the *Markman* briefs, and do not appear to object to those same experts being deposed. Nonetheless, the Camera Manufacturers contend that, “the extent to which expert testimony will be needed can only be determined after the parties exchange claim construction briefing.” (Defendants’ Memorandum, Dkt. 151, p. 10.) Papst submits there is currently enough reasons for this Court to order that expert testimony shall be part of the *Markman* hearing.

First, it is already clear that the intrinsic evidence consisting of the patent claims, specification and prosecution history will be insufficient by itself for a proper claim interpretation. For example, one of the claim phrases at-issue is “whereupon the host

device communicates with the interface device by means of the driver for the input/output device customary in a host device.” In Casio’s Second Supplemental Objections and Responses to Papst Licensing GMBH & Co KG’s Interrogatory No. 1, Casio states “[t]his phrase means that the host device communicates with the interface device using a driver that is "customary" in a host device.” (Ex. A, p. 11.) Casio also alleges in this same answer that “Casio’s digital cameras do not communicate using a “customary driver,” as that term is not clear.” (Ex. A, p. 12.). Casio also alleges, “The term ‘customary’ in the context of the ‘399 and ‘449 patents is vague and unsupported for any interpretation other than for “drivers for hard disks, for graphics devices or for printer device - - - or other storage devices such as floppy disk drives, CD-ROM drives or tape drives.” (Ex. A, p. 8.) Thus, even with access to the entire intrinsic evidence for the at-issue patents, one of the leading camera manufacturers in the world, Casio, could not understand certain claim language finding it “not clear” and “ambiguous.” Live expert testimony will be invaluable to this Court to help explain these and other alleged patent claim ambiguities as they continue to be asserted by the Camera Manufacturers.

As another example, Papst relies on the intrinsic evidence to contend that “[t]he term ‘second connecting device’ as it is used in the ‘399 patent means the structure recited in claim 1, i.e., ‘a sampling circuit for sampling the analog data provided by the data transmit/receive device’ and ‘an analog-to-digital converter for converting data sampled by the sampling circuit into digital data.’ (Dkt. 110, p. 68.)(Ex. B.) The Camera Manufacturers rely on the intrinsic evidence to provide a much different definition for the second connective device for interfacing the interface device. They contend the term means “[a] physical plug or socket for readily attaching and detaching the interface

device with a plurality of dissimilar data transmit/receive devices.” (Olympus Answers to Interrogatories, Ex. 2, pp. 2-3.)(Ex. C.). Thus, the intrinsic evidence alone is already creating apparent ambiguities in the parties’ claim constructions.

Second, while it is possible that this Court may ultimately find that certain expert testimony is not helpful, this Court will likely find other testimony very helpful. This Court always retains the right to discount expert testimony it finds unreliable or unnecessary at the *Markman* hearing. By leaving its options open, Court can consider the reliability or necessity of the expert testimony as it is offered at the *Markman* hearing. The fact that this Court has allotted two full weeks for the *Markman* hearing provides the Court with enough time to consider several different experts thereby entitling each of the parties to their full day in Court. If the Court rules now that no expert testimony should be used at the *Markman* hearing, it will difficult to reverse that decision during the *Markman* hearing should the Court later conclude that experts would be helpful. Thus, there is much to gain and hardly anything to lose in allowing expert testimony at the *Markman* hearing.

Third, the Camera Manufacturers’ brief did not challenge Papst’s cited examples demonstrating how many of the claim terms have particular meanings in the pertinent field. Because written briefs can only explain so much, it will be invaluable for the Court at the *Markman* hearing to have the ability to ask live questions and receive live clarifications from the actual experts on specific claim terms. While the neutral tutorial will educate the Court on the overall technology, the parties will not have the time during this tutorial to educate the Court on the context for each and every specific disputed claim term. Because it is the Court’s task to construe the specific at-issue claims, not the

overall technology, expert testimony will be most helpful to the Court during the actual *Markman* hearing where the specific claim terms will be finally considered in detail.

In view of the many ways by which expert testimony will aid this Court and the parties in the claim interpretation process, Papst respectfully requests that:

- (1) The parties be granted leave to submit expert declarations in support of their *Markman* briefs;
- (2) The parties be granted leave to depose any experts submitting *Markman* briefs at least two weeks in advance of the Court's *Markman* hearing; and
- (3) The parties be granted leave to present expert testimony at this Court's *Markman* hearing.

Dated: July 3, 2008

/s/ Joseph E. Cwik
James P. White
Jerold B. Schnayer
Walter J. Kawula, Jr.
Joseph E. Cwik
WELSH & KATZ, LTD.
120 South Riverside Plaza • 22nd Floor
Chicago, Illinois 60606
(312) 655-1500
**Attorneys Papst Licensing GmbH & Co.
KG**

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

**IN RE PAPST LICENSING GMBH & CO.
KG LITIGATION**

This Document Relates To:

Casio, No. 06-cv-1751

**Misc. Action No. 07-493 (RMC)
MDL Docket No. 1880**

**CASIO'S SECOND SUPPLEMENTAL OBJECTIONS AND RESPONSES TO
PAPST LICENSING GMBH & CO. KG'S
INTERROGATORY NO. 1 TO CASIO INC.**

Pursuant to Rule 33 of the Federal Rules of Civil Procedure, Casio, through counsel, hereby provides a supplemental response to Papst's Interrogatory No. 1.

GENERAL OBJECTIONS

The General Objections and Objections to Instructions and Definitions provided in Casio's initial response to these interrogatories are incorporated by reference.

PAPST'S INTERROGATORIES

INTERROGATORY NO. 1: Describe in full and complete detail how each Casio Digital Camera does not infringe each of the Patents-in-Suit.

OBJECTIONS:

Casio Inc. objects to the deceptive nature in which this interrogatory was written. Stating the interrogatory in this manner, and "defining" it to be wildly overbroad and to request information not even remotely related to the request as written, is an obvious attempt to deceive Casio Inc. into inadvertently waiving objections, or dupe the Court into thinking that Papst is being reasonable in its requests. The request violates Federal Rule 26(g) as "defined" in the Papst instructions, and Papst is hereby put on notice that, in the event this interrogatory is ever brought before the Court, the full overbroad scope of what Papst seeks must be shown to the Court, including the deceptive manner in which Papst attempted to get that information.

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Casio Inc. objects to the definition provided to this interrogatory, as overbroad, unduly burdensome, calling for irrelevant information not reasonably calculated to lead to the discovery of admissible information, as calling for information that is subject to the attorney client privilege, work product, or other immunity, and calls for disclosure of confidential information to Welsh & Katz. Casio will respond only by considering the actual interrogatory recited above, and will provide information only for the first independent claims of the patents as Papst has to date refused to (or has been unable to) explain how the Casio cameras supposedly infringe on these patents, and has not identified any allegedly infringed claims. Casio will only address the claim elements that are missing, not every claim element, and Casio will provide reasonable detail on the reasons for non-infringement. All other requests are overly broad, unduly burdensome, call for information that is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence.

Casio reserves its right to supplement this response as the case proceeds, including but not limited to supplementation after the Court construes the claims, or upon learning Papst's proposed constructions and contentions which, to date, Papst has been unable to provide.

Casio objects to this Interrogatory as improperly being characterized as one interrogatory because its many subparts constitute separate interrogatories. See Fed. R. Civ. P. 33(a).

Subject to its general and specific objections, Casio responds as follows.

FIRST RESPONSE

Casio's cameras do not infringe Papst's patents because Casio's cameras do not meet every claim limitation either literally or under the doctrine of equivalents when comparing the properly construed claims to the accused products. At least the following claim elements are missing from Casio's cameras. Citations in this section are to the '399 patent, but as the '449 patent has the same specification, the support can equally be found in that patent and Casio will rely on the specifications of both patents.

Interface device

No Casio Digital Camera has the required limitation of an “interface device” as that term is properly construed. Both patents teach an interface device that is separate from the transmit/receive (“T/R”) device. For example, the ‘399 patent states at 8:23-33: “In the interface device according to the present invention, an enormous advantage is to be gained . . . in separating the actual hardware . . . [which] allows a plurality of dissimilar device types. . . .”. Similarly, at 1:55-64, the patent discusses different uses of the interface, e.g., a “large number of applications,” and it refers to “any data transmit/receive devices which can be attached to the second connecting device. . . .” (7:41-43). The patents also state that “the interface device according to the present invention . . . [can be used] as an interface between a host device and almost any data transmit/receive device” (‘399 patent, 7:45-49).

The patent claims also clearly require that the interface be separate from the transmit/receive device. See, for example, the language that requires connecting devices for interfacing them, and the language that requires the host to ask what type of device is “attached” to the interface, and requires the interface device to send a signal to the host “regardless of the type of the data transmit/receive device attached.” Thus, the claim language itself makes the ability of a transmit/receive device to “attach” very clear, particularly when considered in light of the specification noted above.

The patents distinguish prior art devices with specific drivers for specific transmit/receive devices. See, e.g., ‘399 patent at 1:20-34. They also teach that the interface must be “flexible to permit attachment of very different electrical or electronic systems to a host device by means of the interface. . . .” Id. At 1:56-60. Every embodiment disclosed in the patents has a separate interface device, and there is inadequate support under 35 U.S.C. 112 for anything but a separate interface device.

All these teachings are inconsistent with an analysis that has the interface device be a selected group of components within the camera itself. This concept runs through both patents and there is never any indication that the applicants had anything in mind other than a separate structure for the interface.

As with all missing claim elements, it is very difficult for Casio to try to explain why there is no infringement by equivalents, as Papst has been unable to provide even a literal infringement analysis, let alone an analysis by equivalents. However, it is clear that any attempt to read this interface limitation and the related language of the claim requiring that devices “attach” to the interface would improperly vitiate this claim language. Moreover, there are clearly very substantial differences in the Casio products and the claimed structure. Indeed, the “enormous advantage” taught by the patents themselves, and the “flexible” nature of the claimed structure are completely missing in the Casio cameras. And given that prior art was distinguished on this ground, no reasonable equivalents analysis could capture the Casio cameras. Casio reserves its right to supplement this response, should Papst ever be able to provide a realistic infringement analysis.

Data transmit/receive device

No Casio Digital Camera has the required limitation of a “data transmit/receive device” (“T/R device”) as that term is properly construed. A T/R device would be understood by a person of ordinary skill in the art to mean a device that transmits and receives information in the

same form. Thus, the CCD identified by Papst as the T/R device could not possibly meet this limitation, as it converts light into an electrical signal – a completely different form of data.

If the patentee had meant that different types of data could be transmitted and received, the claim could have said "a transmit device and a receive device" and these could have transmitted and received different types of data. A data/transmit device is not a device for converting data from one form to another, as is the CCD of the Casio cameras.

With regard to equivalents, this required element is completely missing, and thus any attempt to capture the Casio products under the doctrine of equivalents would improperly vitiate these claim terms in their entirety. It is clear that the Casio CCD functions in a substantially different way, and achieves a different result. Casio has no idea how Papst intends to try to use the doctrine of equivalents to eviscerate this claim limitation, or even if Papst will continue to believe the CCD meets this limitation, and so reserves its right to supplement this response should Papst ever attempt to make such an argument.

Communication between

Further, because Casio's Digital Cameras lack the required limitation that there be a communication between the lens/CCD and host, Casio does not infringe any claim of the '399 or '449 patents.

The "communication between" limitation is part of every claim of the '399 and '449 patents. When properly construed, the T/R device and host must have two-way communication, not just data transfer from one to the other. The word "between" requires two-way communication, and later language in the claims uses the words "from" and "to" showing a contrast with the "between" language used for this communication. *Cf. e.g.*, "a data request command from the host device to the type of input/output device..." and "transfer of the digital data to the host device." This language also shows that communication between the host and T/R device must be bi-directional (commands from the host and data transfer from the T/R device, i.e., if the host requests the data, the T/R device must be able to send data in response thereto). There must be an interchange or exchange of data, as claimed and as plainly taught in the specification. *See, e.g.*, the abstract ("communication between"); '399, 1:9-14 (distinguishing data acquisition and two-way communication).

The lens/CCD of the Casio cameras (which counsel for Papst has alleged to be the T/R device) never receives data from the computer, and in fact, that lens/CCD is not functional at all when the camera is connected to the computer. The only communication with the computer is a communication between the computer and the camera memory, the computer never "communicates" with the lens/CCD.

Even if "communication between" is construed to not require two-way communication, the Casio lens/CCD combination does not communicate at all with the host computer. Rather, the lens/CCD merely sends data to the Analog to Digital ("A/D") converter, and that data is stored in the camera memory. When the camera is attached to the computer, the computer collects information directly from the camera memory. The lens/CCD is not involved in the function of communicating with the computer. The '399 patent, at column 5, lines 47-63, discusses first that data must be "acquired, and transferred to the host device," and in the very next sentence distinguishes that from communication: "The data transmit/receive device itself can also communicate actively with the host device." The communication is described as something different from an intermediate memory merely storing and then sending on data to the

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host, and it requires, as the claims state, actual communication between the T/R device and the host computer. See also, 6:55-68 (the host computer user reading data “from the data transmit/receive device . . .” and discussing the interface function of transferring data “from the data transmit/receive device . . . to the host device . . .”). The patents distinguish the claimed communication between the host and T/R device from “communication between the host device and interface device” (‘399 patent, at 7:14-15).

With regard to equivalents, this required element is completely missing, and thus any attempt to capture the Casio products under the doctrine of equivalents would improperly vitiate these claim terms in their entirety. Moreover, the Casio products function in a substantially different way, in that the cameras do not perform a function that is substantially the same as bi-directional communication. Rather, communication cannot take place between the host device and the imaging portion of the camera. Casio does not know how, if at all, Papst intends to try to use the doctrine of equivalents to eviscerate this claim limitation, and so reserves its right to supplement this response should Papst ever attempt to make such an argument.

Configured by the processor and memory

Even assuming that the Casio CPU and memory are part of an “interface device” as counsel for Papst has asserted, the interpreters in that alleged interface are certainly not configured “by” the processor and memory as expressly required by the claims. The “interpreters” in that alleged interface, to the extent they can even be argued to exist, are software. This software is simply loaded into the memory. The Casio processor has nothing to do with that operation. The memory of the Casio cameras also do not “configure” this in any way, but merely store the software.

The requirement that the interface device interpreters be configured by the processor and memory is not only clear from the claim language, but also from the specification. See, e.g., ‘399 patent, 3:36-47, 3:58-67, 4:65-5:6.

With regard to equivalents, this required element is completely missing, and thus any attempt to capture the Casio products under the doctrine of equivalents would improperly vitiate these claim terms in their entirety. Moreover, the Casio products function in a substantially different way, in that the processor and memory do nothing to configure as required by the claims, and instead software is simply loaded into the Casio cameras. The prosecution history also provides guidance. See e.g., March 18, 2002 Response to Office Action. Casio has no idea how Papst intends to try to use the doctrine of equivalents to eviscerate this claim limitation, and so reserves its right to supplement this response should Papst ever attempt to make such an argument.

Input/output device customary in a host device, regardless of the device attached

Further, no claim of the ‘399 patent nor the ‘449 patent are infringed by Casio because no Casio Digital Camera has the required limitation of an “input/output device customary in a host device,” as that term is properly construed. The claims require that the first command interpreter send a signal to the host that it is an “input/output device customary in a host device.” The Casio camera signals that it is a Casio camera, not a device “customary in a host device,” and it does not provide this information “regardless” of “the device attached”.

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The patent specification clearly supports the plain and ordinary meaning. *See, e.g.*, Abstract (regardless of the device attached); '399 patent, 3:36-47; 3:59-67, 4:8-20, 4:60-5:6; 6:19-22.

The claims and the file history both require that the interface device “lie” to the host computer about the real nature of the device. Indeed, prior art was distinguished on precisely this ground during prosecution, creating an estoppel. As above, Casio cameras never lie to the host computer. Rather, the Casio cameras identify themselves as Casio cameras.

This required element is also completely missing, and thus any attempt to capture the Casio products under the doctrine of equivalents would improperly vitiate these claim terms in their entirety. Moreover, the Casio products function in a substantially different way, in that the cameras identify themselves to a host device only for the specific hardware arrangement of the camera itself and no other. This is neither substantially the same function as “regardless” of “the device attached” nor substantially the same way. Casio does not know how Papst intends to try to use the doctrine of equivalents to eviscerate this claim limitation, and so reserves its right to supplement this response should Papst ever attempt to make such an argument.

Virtual file system

With respect specifically to the claims of the '449 patent, all require the interface device to simulate a virtual file system. A virtual file system is described, for example, in the '399 patent at 6:1-3: the interface device “simulates a hard disk with a root directory whose entries are ‘virtual’ and can be created for the most varied functions.” Also, as described in the '449 patent at 11:1-6 and the '399 patent at 11:66-12:4: “Using the ASPI manager the interface device according to the present invention can now obtain active access to an SCSI hard disk of the host device connected to the same SCSI bus which, in contrast to the interface device, cannot be a virtual but a real SCSI mass storage device or also a further interface device according to the present invention.” *See also*, '399 patent, 12:25-33, and the '449 prosecution history (e.g., 5/17/04 Notice of Allowability).

In the Casio cameras, the computer directly accesses a real file system. The system is not “virtual” in any sense of the word.

With regard to equivalents, this required element is also completely missing, and thus any attempt to capture the Casio products under the doctrine of equivalents would improperly vitiate these claim terms in their entirety. Moreover, the Casio products function in a substantially different way, in that with respect to Casio cameras, the computer directly accesses a real file system. The system is not “virtual” in any way. Casio has no idea how Papst intends to try to use the doctrine of equivalents to eviscerate this claim limitation, and so reserves its right to supplement this response should Papst ever attempt to make such an argument.

SUPPLEMENTAL RESPONSE

All the objections and responses in our First Responses are incorporated by reference.

Casio Inc.'s proposed claim constructions were already provided above for the elements that appear to be at issue, but Casio, Inc. herein supplements those constructions in a good faith effort to address questions of counsel for Papst, and despite Papst's refusal to provide proper claim constructions as ordered by the Court. Casio reserves its right to supplement this response

as the case proceeds, including but not limited to supplementation after the Court construes the claims, or upon learning Papst's proposed constructions and contentions which, to date, Papst has been unable to provide.

Casio notes that it has not been accused of direct infringement of any claim, nor could it be because it does not make or sell the host. Despite repeated Court orders to explain how it is contending that Casio infringes, Papst has not provided any cogent theory of infringement. Papst should be precluded from advancing any infringement theory now, but to the extent that ever happens, Casio will respond and supplement as necessary.

I. Claim 1 of United States Patent 6,470,399

A. An interface device for communication between

"Interface Device" interpretation: "Interface Device" means a physically separate and distinct component different from the host device or the Data Transmit/Receive Device that is capable of regulating the electrical communications between host device and a plurality of interchangeable data transmit/receive devices.

Both patents teach an interface device that is separate from the transmit/receive ("T/R") device. For example, the '399 patent states at 8:23-33: "In the interface device according to the present invention, an enormous advantage is to be gained . . . in separating the actual hardware . . . [which] allows a plurality of dissimilar device types. . . .". Similarly, at 1:55-64, the patent discusses different uses of the interface, e.g., a "large number of applications," and it refers to "any data transmit/receive devices which can be attached to the second connecting device. . . ." (7:41-43). The patents also state that "the interface device according to the present invention . . . [can be used] as an interface between a host device and almost any data transmit/receive device" ('399 patent, 7:45-49). See also the claims, which refer to a "multi-purpose" interface.

The patent claims also clearly require that the interface be separate from the transmit/receive device. See, for example, the language that requires connecting devices for interfacing them, and the language that requires the host to ask what type of device is "attached" to the interface, and requires the interface device to send a signal to the host "regardless of the type of the data transmit/receive device attached." Thus, the claim language itself makes the ability of a transmit/receive device to "attach" very clear, particularly when considered in light of the specification noted above.

The patents distinguish prior art devices with specific drivers for specific transmit/receive devices. See, e.g., '399 patent at 1:20-34. They also teach that the interface must be "flexible to permit attachment of very different electrical or electronic systems to a host device by means of the interface. . . ." *Id.* at 1:56-60. Every embodiment disclosed in the patents has a separate interface device, and there is inadequate support under 35 U.S.C. 112 for anything but a separate interface device. Casio also relies on the plain and ordinary meaning of these terms.

"communication between" interpretation: "Communication Between" means two-way communication directly between the host and input/output device.

The "communication between" limitation is part of every claim of the '399 and '449 patents. When properly construed, the T/R device and host must have two-way communication, not just data transfer from one to the other. The word "between" requires two-way communication, and later language in the claims uses the words "from" and "to" showing a contrast with the "between" language used for this communication. *Cf. e.g.*, "a data request

command from the host device to the type of input/output device..." and "transfer of the digital data to the host device." This language also shows that communication between the host and T/R device must be bi-directional (commands from the host and data transfer from the T/R device, i.e., if the host requests the data, the T/R device must be able to send data in response thereto). There must be an interchange or exchange of data, as claimed and as plainly taught in the specification. *See, e.g.*, the abstract ("communication between"); '399, 1:9-14 (distinguishing data acquisition and two-way communication).

The '399 patent, at column 5, lines 47-63, also discusses first that data must be "acquired, and transferred to the host device," and in the very next sentence distinguishes that from communication: "The data transmit/receive device itself can also communicate actively with the host device." The communication is described as something different from an intermediate memory merely storing and then sending on data to the host, and it requires, as the claims state, actual communication between the T/R device and the host computer. *See also*, 6:55-68 (the host computer user reading data "from the data transmit/receive device . . ." and discussing the interface function of transferring data "from the data transmit/receive device . . . to the host device . . ."). The patents distinguish the claimed communication between the host and T/R device from "communication between the host device and interface device" ('399 patent, at 7:14-15). Casio also relies on the plain and ordinary meaning of these terms.

No Infringement

The Casio cameras are not and do not have Interface Devices as properly construed, as they have no separate interface, and they have nothing with the ability to regulate a plurality of interchangeable devices. The Casio cameras also do not have two way communications between the host device and interface device. Accordingly, these elements provide two reasons why there is no infringement. With regard to equivalents, that has not been asserted by Papst. *See also* Casio's first response.

B. a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and

Interpretation : "Host Device" means a separate and distinct hardware component from the interface device or the data transmit/receive device. The host device must include software drivers for input/output devices that are connected to the interface device and "customary in a host device" (see below), and also drivers for a multipurpose interface. Casio also relies on the plain and ordinary meaning of these terms.

"customary" interpretation: The term "customary" in the context of the '399 and '449 patents is vague and unsupported for any interpretation other than for "drivers for hard disks, for graphics devices or for printer devices ... or other storage devices such as floppy disk drives, CD-ROM drives or tape drives." In any event, there is nothing in the patents that suggests that cameras would be "customary". *See* '399 patent col. 4, lns. 27-39. Indeed the word "camera" never appears in the patent specification at all. Casio also relies on the plain and ordinary meaning of these terms.

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No Infringement

The Casio cameras do not have host devices as properly construed. They are sold as stand-alone cameras. Casio cameras also have nothing to do with any "customary" drivers for hard disks, for graphics devices or for printer devices or other storage devices such as floppy disk drives, CD-ROM drives or tape drives. With regard to equivalents, that has not been asserted by Papst. See also Casio's first response.

C. a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising:

Interpretation : "Data Transmit/Receive Device" means a distinct piece of hardware separate from an Interface Device capable of providing and/or receiving analog data directly to and/or from a host device through the separate Interface Device. The Data Transmit/Receive Device must transmit and receive information in the same form.

A Data Transmit/Receive Device limitation is part of every claim of the '399 and '449 patents. A "T/R" device would be understood by a person of ordinary skill in the art to mean a device that transmits and receives information in the same form. Moreover, if the patentee had meant that different types of data could be transmitted and received, the claim could have said "a transmit device and a receive device" and these could have transmitted and received different types of data. A data/transmit device is not a device for converting data from one form to another. Further, one of ordinary skill in the art would recognize that the claim itself requires that the data format of the communication be analog, as opposed to digital. Casio also relies on the plain and ordinary meaning of these terms.

No Infringement

Casio's digital cameras are unitary pieces of hardware without interface devices separate from data transmit/receive devices. Casio's digital cameras do not have any components that can both transmit and receive analog data, and the components alleged by Papst to meet these limitations do not transmit and receive data in the same form. With regard to equivalents, that has not been asserted by Papst. See also Casio's first response.

D. a processor;

Interpretation: Processor means the microprocessor of a computer capable of receiving and executing logical instructions. Casio also relies on the plain and ordinary meaning of this term.

No Infringement

Casio does not dispute that its cameras have a processor, but does not infringe due to the many other missing claim elements. See also Casio's first response.

E. a memory;

Interpretation: Memory has its ordinary meaning, and includes any memory. '399 patent col. 7, lns 23-29. Casio also relies on the plain and ordinary meaning of this term.

No Infringement

Casio does not dispute that its cameras have a memory, but does not infringe due to the many other missing claim elements. See also Casio's first response.

- F. a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and

Interpretation: "First connecting device" means the component of the interface device that electrically connects the host device to the separate interface device. The first connecting device also allows direct, two way communication between the host device and the interface device.

No Infringement

Casio does not provide any host device with its digital cameras and so does not meet this element of the claim, and Papst has not asserted any indirect claims of infringement. Moreover, as Casio has no "interface device" as properly interpreted, that provides another reason why this language is not met. With regard to equivalents, that has not been asserted by Papst. See also Casio's first response.

- G. a second connecting device for interfacing the interface device with the data transmit/receive device, the second connecting device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,

Interpretation: This language means a component of the interface device that electrically connects a transmit/receive device to the separate interface device. The second connecting device also must allow direct, two way communication between a transmit/receive device and the interface device. Also, the second connecting device must include both a circuit for sampling the analog data that is provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data. Casio also relies on the plain and ordinary meaning of this phrase.

No Infringement

Casio's digital cameras have no second connecting device that electrically connects a transmit/receive device to a physically separate interface device. Casio's digital cameras also have no second connecting device that allows direct, two way communication between a transmit/receive device to the separate interface device. With regard to equivalents, Papst has not asserted infringement by equivalents. See also Casio's first response.

- H. wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter,

Interpretation: This phrase means that the processor and the memory built into the interface device together are responsible for the configuration of the interface device into a distinct first command interpreter and a distinct second command interpreter. First command interpreter and second command interpreter are defined elsewhere. The interface device must be configured by the processor and memory, which does not include simply downloading software into the camera from an external source.

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The requirement that the interface device interpreters be configured by the processor and memory is not only clear from the claim language, but also from the specification. *See, e.g.*, '399 patent, 3:36-47, 3:58-67, 4:65-5:6.

This configuration must also create all of the functionality required as defined in the definition of the first command interpreter and second command interpreter.

No Infringement

The Casio processor and memory do not configure anything that functions as a distinct first command interpreter or a distinct second command interpreter. With regard to equivalents, Papst has not asserted infringement by equivalents. See also Casio's first response.

- 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, 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,

Interpretation: This means a structure within the interface device that is configured by the processor and memory of the interface device. The first command interpreter must be capable of sending a signal to the host device when an inquiry from the host device is received requesting the type of a device that is attached to the interface device. The signal sent to the host by the first command interpreter must "lie" to the host and tell the host that something other than what is connected to the host is connected. *See, e.g.*, File History of the '399 patent. This means that regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, the host device must receive a signal that an input/output device "customary" (see response to Interrogatory No. 2) in a host device is attached to the second connecting device of the interface device. Casio also relies on the plain and ordinary meanings of this phrase.

No Infringement

Casio's digital cameras have no structure or functionality that is configured by any interface device's processor and memory that functions as required by this claim language. Further, Casio's digital cameras never "lie" to the host computer about what is connected. With regard to equivalents, Papst has not asserted infringement by equivalents. See also Casio's first response.

- J. 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

Interpretation: This phrase means that the host device communicates with the interface device using a driver that is "customary" in a host device. The communication, through the "customary" driver must occur regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device. See the response to Interrogatory No. 2 regarding the "customary" language of the claim.

No Infringement

Casio's digital cameras do not communicate using a "customary" driver, as that term is not clear. See the response to Interrogatory No. 2. With regard to equivalents, Papst has not asserted infringement by equivalents. See also Casio's first response.

- K. 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.

Interpretation: "Second command interpreter" means a structure or component within the interface device that is configured by the processor and memory of the interface device. This second command interpreter must be capable receiving a data request command from a host computer in the format of a device that the first command interpreter had previously "lied" to the host computer about. This second command interpreter must be capable of understanding the data request command from the host as a data transfer command for initiating the transfer of digital data to the host device.

No Infringement

Casio's digital cameras have no structure or functionality that is configured by any interface device's processor and memory that functions as required by the term second command interpreter. With regard to equivalents, Papst has not asserted infringement by equivalents. See also Casio's first response.

II. Claim 1 of U.S. Patent No. 6,895,449

- A. An interface device for communication between

"Interface Device" interpretation: "Interface Device" means a physically separate and distinct component different from the host device or the Data Transmit/Receive Device that is capable of regulating the electrical communications between host device and a plurality of interchangeable kinds of data transmit/receive devices.

Both patents teach an interface device that is separate from the transmit/receive ("T/R") device. For example, the '449 patent states at 7:23-30: "In the interface device according to the present invention, an enormous advantage is to be gained . . . in separating the actual hardware . . . [which] allows a plurality of dissimilar device types. . . .". Similarly, at 1:56-65, the patent discusses different uses of the interface, e.g., a "large number of applications," and it refers to "any data transmit/receive devices which can be attached to the second connecting device. . . ." (6:41-42). The patents also state that "the interface device according to the present invention . . . [can be used] as an interface between a host device and almost any data transmit/receive device" ('449 patent, 6:45-49). See also the claims, which refer to a "multi-purpose" interface.

The patent claims also clearly require that the interface be separate from the transmit/receive device. See, for example, the language that requires connecting devices for interfacing them, and the language that requires the host to ask what type of device is "attached" to the interface, and requires the interface device to send a signal to the host "regardless of the type of the data transmit/receive device attached." Thus, the claim language itself makes the

ability of a transmit/receive device to "attach" very clear, particularly when considered in light of the specification noted above.

The patents distinguish prior art devices with specific drivers for specific transmit/receive devices. *See, e.g.*, '449 patent at 1:21-34. They also teach that the interface must be "flexible to permit attachment of very different electrical or electronic systems to a host device by means of the interface...." *Id.* at 1:58-60. Every embodiment disclosed in the patents has a separate interface device, and there is inadequate support under 35 U.S.C. 112 for anything but a separate interface device. Casio also relies on the plain and ordinary meaning of these terms.

"communication between" interpretation: "Communication Between" means two-way communication directly between the host and input/output device.

The "communication between" limitation is part of every claim of the '399 and '449 patents. When properly construed, the T/R device and host must have two-way communication, not just data transfer from one to the other. The word "between" requires two-way communication, and later language in the claims uses the words "from" and "to" showing a contrast with the "between" language used for this communication. *Cf. e.g.*, "a data request command from the host device to the type of input/output device..." and "transfer of the digital data to the host device." This language also shows that communication between the host and T/R device must be bi-directional (commands from the host and data transfer from the T/R device, i.e., if the host requests the data, the T/R device must be able to send data in response thereto). There must be an interchange or exchange of data, as claimed and as plainly taught in the specification. *See, e.g.*, the abstract ("communication between"); '399, 1:13-17 (distinguishing data acquisition and two-way communication).

The '449 patent, at 4:46-62, also discusses first that data must be "acquired, and transferred to the host device," and in the very next sentence distinguishes that from communication: "The data transmit/receive device itself can also communicate actively with the host device." The communication is described as something different from an intermediate memory merely storing and then sending on data to the host, and it requires, as the claims state, actual communication between the T/R device and the host computer. *See also*, 5:55-67 (the host computer user reading data "from the data transmit/receive device . . ." and discussing the interface function of transferring data "from the data transmit/receive device . . . to the host device . . ."). The patents distinguish the claimed communication between the host and T/R device from "communication between the host device and interface device" ('449 patent, at 6:13-15). Casio also relies on the plain and ordinary meaning of these terms.

No Infringement

The Casio cameras are not and do not have Interface Devices as properly construed, as they have no separate interface, and they have nothing with the ability to regulate a plurality of interchangeable devices. The Casio cameras also do not have two way communications between the host device and interface device. Accordingly, these elements provide two reasons why there is no infringement. With regard to equivalents, that has not been asserted by Papst. *See also* Casio's first response.

B. a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and

Interpretation : "Host Device" means a separate and distinct hardware component from the interface device or the data transmit/receive device. The host device must include software drivers for input/output devices that are connected to the interface device and "customary in a host device" (see below), and also drivers for a multipurpose interface. Casio also relies on the plain and ordinary meaning of these terms.

"customary" interpretation: The term "customary" in the context of the '399 and '449 patents is vague and unsupported for any interpretation other than for "drivers for hard disks, for graphics devices or for printer devices ... [or] other storage devices such as floppy disk drives, CD-ROM drives or tape drives." In any event, there is nothing in the patents that suggests that cameras would be "customary". See '449 patent 3:30-43. Indeed the word camera never appears in the patent specification at all.

No Infringement

The Casio cameras do not have host devices as properly construed. They are sold as stand-alone cameras. Casio cameras also have nothing to do with any "customary" drivers for hard disks, for graphics devices or for printer devices or other storage devices such as floppy disk drives, CD-ROM drives or tape drives. With regard to equivalents, that has not been asserted by Papst. See also Casio's first response.

C. a data transmit/receive device comprising the following features:

Interpretation : "Data Transmit/Receive Device" means a distinct piece of hardware separate from an Interface Device capable of providing and/or receiving analog data directly to and/or from a host device through the separate Interface Device. The Data Transmit/Receive Device must transmit and receive information in the same form.

A Data Transmit/Receive Device limitation is part of every claim of the '399 and '449 patents. A "T/R" device would be understood by a person of ordinary skill in the art to mean a device that transmits and receives information in the same form. Moreover, if the patentee had meant that different types of data could be transmitted and received, the claim could have said "a transmit device and a receive device" and these could have transmitted and received different types of data. A data/transmit device is not a device for converting data from one form to another. Further, one of ordinary skill in the art would recognize that the claim itself requires that the data format of the communication be analog, as opposed to digital. Casio also relies on the plain and ordinary meaning of these terms.

No Infringement

Casio's digital cameras are unitary pieces of hardware without interface devices separate from data transmit/receive devices. Casio's digital cameras do not have any components that can both transmit and receive analog data, and the components alleged by Papst to meet these limitations do not transmit and receive data in the same form. With regard to equivalents, that has not been asserted by Papst. See also Casio's first response.

D. a processor;

Interpretation: Processor means the microprocessor of a computer capable of receiving and executing logical instructions. Casio also relies on the plain and ordinary meaning of this term.

No Infringement

Casio does not dispute that its cameras have a processor, but does not infringe due to the many other missing claim elements. See also Casio's first response.

E. a memory;

Interpretation: Memory has its ordinary meaning, and includes any memory. '449 patent, at 6:23-29. Casio also relies on the plain and ordinary meaning of this term.

No Infringement

Casio does not dispute that its cameras have a memory, but does not infringe due to the many other missing claim elements. See also Casio's first response.

F. a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and

Interpretation: "First connecting device" means the component of the interface device that electrically connects the host device to the separate interface device. The first connecting device also allows direct, two way communication between the host device and the interface device.

No Infringement

Casio does not provide any host device with its digital cameras and so does not meet this element of the claim, and Papst has not asserted any indirect claims of infringement. Moreover, as Casio has no "interface device" as properly interpreted, that provides another reason why this language is not met. With regard to equivalents, that has not been asserted by Papst. See also Casio's first response.

G. a second connecting device for interfacing the interface device with the data transmit/receive device,

Interpretation: This language means a component of the interface device that electrically connects a transmit/receive device to the separate interface device. The second connecting device also must allow direct, two way communication between a transmit/receive device and the interface device. Casio also relies on the plain and ordinary meaning of this phrase.

No Infringement

Casio's digital cameras have no second connecting device that electrically connects a transmit/receive device to a physically separate interface device. Casio's digital cameras also have no second connecting device that allows direct, two way communication between a transmit/receive device to the separate interface device. With regard to equivalents, Papst has not asserted infringement by equivalents. See also Casio's first response.

EXHIBIT A

- H. wherein the interface device is configured by the processor and the memory 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, 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 a storage device customary in a host device,

Interpretation: This term means that the processor and the memory built into the interface device together are responsible for the configuration of the interface device to provide the specific functionality described in the rest of the claim. This configuration must enable the interface device to be able to signal to the host that a storage device customary in the host device is attached to the interface device regardless of the type of transmit/receive device actually attached to the interface device.

The interface device must be configured by the processor and memory, which does not include simply downloading software into the camera from an external source. The requirement that the interface device interpreters be configured by the processor and memory is not only clear from the claim language, but also from the specification. See, e.g., '449 patent, 4:6-10.

No Infringement

The processor in combination with the memory in Casio digital cameras do not configure anything to provide functionality to an interface device allowing a signal to be sent to a host that a storage device customary in the host device is attached to the interface device regardless of the type of transmit/receive device actually attached to the interface device. With regard to equivalents, Papst has not asserted infringement by equivalents. See also Casio's first response.

- I. whereupon the host device communicates with the interface device by means of the driver for the storage device customary in a host device, and

Interpretation: This phrase means that the host device sends messages to the interface device using a storage device driver that is "customary" in a host device. The communication, through the "customary" driver must occur regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device

The specific language "customary in a host device" is not capable of interpretation. See response to Interrogatory No. 2.

No Infringement

Casio's digital cameras can not be interpreted as customary devices, to the extent the term is definable. Casio's digital cameras are cameras and require drivers associated with cameras, not storage devices.

- J. wherein the interface device is arranged for simulating a virtual file system to the host, the virtual file system including a directory structure.

"virtual file system" interpretation: A file system that is not real, but instead simulates a hard disk file system.

EXHIBIT A

A virtual file system is described, for example, in the '449 patent at 4:67-5:2: the interface device "simulates a hard disk with a root directory whose entries are 'virtual' files which can be created for the most varied functions." Also, as described in the '449 patent at 11:1-6 and the '399 patent at 11:66-12:4: "Using the ASPI manager the interface device according to the present invention can now obtain active access to an SCSI hard disk of the host device connected to the same SCSI bus which, in contrast to the interface device, cannot be a virtual but a real SCSI mass storage device or also a further interface device according to the present invention." *See also*, '449 patent, 12:25-33, and the '449 prosecution history (e.g., 5/17/04 Notice of Allowability).

No Infringement

The file system associated with photographic data in Casio's digital cameras is not virtual, but is an actual file system associated with the storage of data on the internal memory card of Casio's digital cameras.

SECOND SUPPLEMENTAL RESPONSE

All the objections and responses in Casio's previous Responses are incorporated by reference. Casio reserves its right to supplement this response as the case proceeds, including but not limited to supplementation after the Court construes the claims, or upon learning Papst's proposed constructions and contentions.

All claims of the '399 patent require

"an analog-to-digital converter for converting data sampled by the sampling circuit into digital data" ...

"wherein the second command interpreter is configured to interpret a data request command from the host device ... as a data transfer command for initiating a transfer of the digital data to the host device."

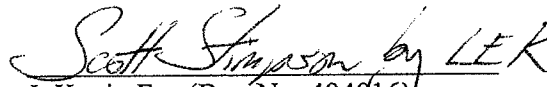
"the digital data" Interpretation: The plain meaning of the "the digital data" limitation indicates that the camera transfers the same digital data output of its A/D converter to the PC in response to a request from the PC. As further evidence, Papst, in their response to Casio's Interrogatory No. 7, admitted that "[t]he transfer of 'the digital data' refers to the data that was

digitized in the analog-to-digital converter....” See Page 13 of Papst’s Objections and Supplemental to Casio Inc.’s Interrogatory No. 7, served on April 18, 2008.

No Infringement

The data output by the Casio camera's A/D converter is different from the data transferred to the PC because it undergoes processing. Accordingly, Casio's digital cameras do not infringe literally because they do not transfer the same digital data rendered by the A/D converter to the PC. Furthermore, the '399 patent applicant, in response to the rejection of all pending claims in the '399 patent application, amended all of the independent claims to include “an analog-to-digital converter for converting data sampled by the sampling circuit into digital data” and “initiating a transfer of the digital data to the host device” to overcome a § 103 obviousness rejection over certain prior art references. Because the limitation regarding “the digital data” was added by the '399 patent applicant in order to overcome a previous rejection of the claims, equivalents are precluded. See *Ampex Corp. v. Eastman Kodak Co.*, 460 F. Supp.2d 563 (D. Del. 2006), *aff'd*, 2008 WL 343253 (Fed. Cir. 2008).

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J. Kevin Fee (Bar. No. 494016)
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, D.C. 20004

Scott D. Stimpson, Esq. (*pro hac vice*)
The Law Office of Scott D. Stimpson
445 Hamilton Avenue, 11th Floor
White Plains, New York 10601
Tel. 203-258-8412

Attorneys for Plaintiff and Counter Defendant
Casio America Inc. and Counter Defendant
Casio Computer Co., Ltd.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing CASIO INC.'S SECOND SUPPLEMENTAL OBJECTIONS AND RESPONSES TO PAPST LICENSING GMBH & CO. KG'S INTERROGATORIES NO.1 TO CASIO INC. was served on this, the 13th day of May, 2008, upon the attorneys for Papst as follows:

VIA U.S. MAIL and E-MAIL

James P. White
Jerold B. Schnayer
Joseph E. Cwik
WELSH & KATZ, LTD.
120 South Riverside Plaza • 22nd Floor
Chicago, Illinois 60606

Robert F. Muse
STEIN MITCHELL & MEZINES, LLP
1100 Connecticut Ave., NW
Washington, D.C. 20036
(202) 737-7777

Attorneys for Defendant/Counter-Plaintiff,
Papst Licensing GmbH & Co. KG

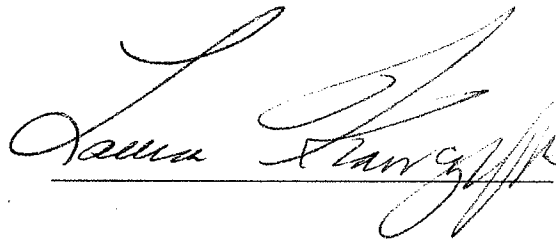
A handwritten signature in black ink, appearing to read "Laura Langguth", written over a horizontal line.

EXHIBIT B**2. Processor.**

The term "processor" means "any [] kind of microprocessor," including Digital Signal Processors. A Digital Signal Processor (e.g., claim 5 of the '399 patent) should be given its plain and ordinary meaning of a processor with a "pipeline" architecture optimized to perform repetitive operations.

3. Memory

Memory should be given its plain and ordinary meaning, and encompass any type of memory.

4. First Connecting Device

The term "first connecting device" means the circuitry used to interface the interface device to the host PC. The first connecting device should not be limited to a mere connector. Examples of a "first connecting device" described in the '399 patent and the '449 patent include an interface circuit. The Digital Cameras in suit all include a first connecting device because they include a Universal Serial Bus (USB) circuit. The USB interface circuit is for interfacing the interface device with a multipurpose USB interface on a host PC.

5. Second Connecting Device

The term "second connecting device" as it is used in the '399 patent means the structure actually recited in claim 1, i.e., "a sampling circuit for sampling the analog data provided by the data transmit/receive device" and "an analog-to-digital converter for converting data sampled by the sampling circuit into digital data." The word "including" means that the second connecting device includes, but is not limited to, the sampling circuit and the analog to digital converter. The terms "sampling circuit" and "analog to

EXHIBIT 2 TO OLYMPUS'S RESPONSES TO PAPST'S SECOND REVISED FIRST JOINT SET OF INTERROGATORIES TO DEFENDANTS

USP 6,470,399's Claim Language Claim 1	Terms requiring Construction	Proposed Construction and Intrinsic Support
		interface device. See Abstract, Col. 3:25-28, Col. 5:56-63, Col. 6:55-67, Col. 7:17-22, Col. 8:43-45, '399 Patent File History, Paper 8, March 18, 2002 Amendment, at 5-6.
	for communication between a host device . . . and a data transmit/receive device	For transmitting of information bidirectionally and actively between two devices. See Col. 5:56-63, Col. 5:46-56, Col. 5:56-62, and Figs. 1 and 2.
	multi-purpose interface	A communication interface designed for use with multiple devices having different functions from each other. See Col. 4:40-60, Col. 5:22-32.
a processor;		
a memory;		
a <i>first connecting device for interfacing the host device with the interface device</i> via the multi-purpose interface of the host device; and	interfacing	physically connecting See Col. 9:30 – Col. 10:14, Fig. 2.
	first connecting device for interfacing the host device with the interface device	A physical plug or socket for readily attaching and detaching the interface device with the host device. See Col. 5:48-63, Col. 9:30-48, Col. 10:59-65
a <i>second connecting device for interfacing the interface device</i>	second connecting device for interfacing the interface device	A physical plug or socket for readily attaching and detaching the interface device with a plurality of

EXHIBIT C

EXHIBIT 2 TO OLYMPUS'S RESPONSES TO PAPST'S SECOND REVISED FIRST JOINT SET OF INTERROGATORIES TO DEFENDANTS

USP 6,470,399's Claim Language Claim 1	Terms requiring Construction	Proposed Construction and Intrinsic Support
<i>with the data transmit/receive device</i>, the second connecting circuit device including a sampling circuit for sampling the analog data provided by the data transmit/receive device and an analog-to-digital converter for converting data sampled by the sampling circuit into digital data,	with the data transmit/receive device	dissimilar data transmit/receive devices. <i>See</i> Col. 1:55-59, Col. 5:52-63, Col. 6:19-22, Col. 7:12-22, Col. 7:37-49, Col. 8:23-42, Col. 9:49-64, Col. 10:28-32, Col. 12:38-41.
<i>wherein the interface device is configured by the processor and the memory to include a first command interpreter and a second command interpreter,</i>	first command interpreter	A software program for interpreting an inquiry from a host device and sending a signal to the host device in response that "lies to the host computer as to the real nature of the data transmit/receive device." `399 Patent File History, Paper 8, March 18, 2002 Amendment, at 5-6.
	second command interpreter	A software program for translating data request commands from the host into data transfer commands understandable by a plurality of dissimilar data transmit/receive devices. <i>See</i> Col. 6:40 – 7:22; Col. 7:37-49, Col. 8:29-30, `399 Patent File History, Paper 8, March 18, 2002 Amendment, at 5-6.