IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PAPST LICENSING GMBH & CO. KG, Plaintiff, v. OLYMPUS CORPORATION; OLYMPUS IMAGING AMERICA, INC., Defendants.	)	C.A. No. 07-415-***

DECLARATION OF DAVID BEN-MEIR IN SUPPORT OF DEFENDANTS' MOTION TO TRANSFER THIS ACTION TO THE DISTRICT OF COLUMBIA

I, David Ben-Meir, declare and state as follows:

1. I am a partner of Hogan & Hartson, LLP, and attorney of record for defendants Olympus Corporation and Olympus Imaging America, Inc. (collectively, "Olympus") in this action. I submit this Declaration in support of Defendants' Motion to Transfer This Action To the United States District Court For The District Of Columbia. The following is of my personal knowledge and if called as a witness, I could and would competently testify thereto.

2. Since about March 13, 2006, Papst has been threatening to sue Olympus for infringement of U.S. Patent No. 6,470,399 ("the '399 patent") and U.S. Patent No. 6,895,449 (the '449 patent.).

3. Attached here as Exhibit A is a true and correct copy of a list of patent-related cases since 1994 in the United States involving Papst Licensing GmbH & Co. KG's ("Papst").

4. Attached here as Exhibit B is a true and correct copy of an article, entitled *Papst Defeats Minebea in Long-Running Patent Dispute*, from Papst's website at http://www.papstlicensing.de

5. Attached here as Exhibit C is a true and correct copy of the Complaint from the action, *Casio, Inc. v. Papst Licensing GmbH & Co. KG*, Civil Action No. 1:06CV01751 ("the *Casio* action").

6. Attached here as Exhibit D is a true and correct copy of the Answer and Counterclaim from the *Casio* action.

7. Attached here as Exhibit E is a true and correct copy of the Scheduling Order from the *Casio* action.

8. Attached here as Exhibit F is a true and correct copy of Judge Kessler's Order re Papst's Motion to Stay Proceedings in the *Casio* action.

9. Attached here as Exhibit G is a true and correct copy of the transcript of Motions Hearing Before the Hon. Deborah A. Robinson, United States Magistrate Judge, in the *Casio* action.

10. Attached here as Exhibit H is a true and correct copy of Papst's Motion to Continue Magistrate Judge Robinson's July 23, 2007 Motion Hearing in the *Casio* action.

11. Attached here as Exhibit I is a true and correct copy of the Complaint from *Papst Licensing GmbH & Co. KG v. Fujifilm Corporation, Fujifilm U.S.A., Inc.*, Civil Action No. 1:07CV3401 ("the *Fujifilm* action").

12. Attached here as Exhibit J is a true and correct copy of the Complaint from *Fujifilm Corporation and Fujifilm U.S.A., Inc. v. Papst Licensing GmbH & Co. KG*, Civil Action No. 07CV3401.

13. Attached here as Exhibit K is a true and correct copy of a document from the United States Patent and Trademark Office's website at http://www.portal.uspto.gov.

14. Attached here as Exhibit L is a true and correct copy of the Complaint from *Matsushita Electric Industrial Co., Ltd. and Victor Company of Japan Ltd. v. Papst Licensing* GmbH & Co. KG, Civil Action No. 1:07CV012222.

15. Attached here as Exhibit M is a true and correct copy of the Complaint from this case, *Papst Licensing GmbH & Co. KG v. Olympus Corporation, Olympus Imaging America, Inc.*, Civil Action No. 1:07CV0415.

16. Attached here as Exhibit N is a true and correct copy of the Complaint from *Papst Licensing GmbH & Co. KG v. Samsung Techwin Co., Samsung Opto-Electronics America, Inc.*, Civil Action No. 1:07CV4249.

17. Attached here as Exhibit O are true and correct copies of Papst's Motion For Transfer, and the Memorandum of Points and Authorities in support thereof, filed with the Judicial Panel on Multi-district Litigation.

18. Attached here as Exhibit P is a true and correct copy of a document from Welsh & Katz, Ltd's website at http://www.welshkatz.com.

19. Attached here as Exhibit Q is a true and correct copy of Fujifilm Corporation and Fujifilm U.S.A., Inc.'s Motion to Transfer, from the *Fujifilm* action.

20. Attached here as Exhibit R is a true and correct copy of a document from Welsh & Katz, Ltd.'s website at http://www.welshkatz.com.

21. Attached here as Exhibit S is a true and correct copy of a document from Welsh & Katz, Ltd.'s website at http://www.welshkatz.com.

22. Attached here as Exhibit T is a true and correct copy of a document entitled "Part B-Fee(s) Transmittal" and a document entitled "Declaration and Power of Attorney for Patent Application" from the patent file history for the '399 patent.

23. Attached here as Exhibit U is a true and correct copy of a document entitled "Part B-Fee(s) Transmittal" from the patent file history for the '449 patent.

24. Attached here as Exhibit V is a true and correct copy of a document entitled "Transmittal Letter" and a document entitled "Executed Revocation of Power of Attorney With New Power of Attorney, Change of Correspondence Address, And Statement Under 37 C.F.R. 3.73(b)" from the patent file history for the '399 patent.

25. Attached here as Exhibit W is a true and correct copy of a document from Patton Boggs LLP's website at http://www.pattonboggs.com.

26. Attached here as Exhibit X is a true and correct copy of a document from Kaplan, Gilman, Gibson, & Dernier L.L.P.'s website at http://www.lawyers.com/kaplangilman.

27. Attached here as Exhibit Y is a true and correct copy of a document from Glenn Patent Group's website at http://www.glenn-law.com.

I declare under the penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this ___ day of August, 2007, in Los Angeles, California.

/s/ David Ben-Meir
David Ben-Meir

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CERTIFICATE OF SERVICE

I, Kenneth L. Dorsney, hereby certify that on August 1, 2007, the attached document was electronically filed with the Clerk of the Court using CM/ECF which will send notification to the registered attorney(s) of record that the document has been filed and is available for viewing and downloading.

I hereby certify that on August 1, 2007, I have Electronically Mailed the document to the following person(s):

Steven J. Balick
John G. Day
Lauren E. Maguire
Ashby & Geddes
500 Delaware Avenue, 8th Floor
P.O. Box 1150
Wilmington, DE 19899
sbalick@ashby-geddes.com
jday@ashby-geddes.com
lmaguire@ashby-geddes.com

Jerold B. Schnayer
John L. Ambrogi
Welsh & Katz, Ltd.
120 South Riverside Plaza, 22nd Floor
Chicago, Illinois 60606
jbschnayer@welshkatz.com
jambrogi@welshkatz.com

/s/ Kenneth L. Dorsney
Richard L. Horwitz
Kenneth L. Dorsney
Potter Anderson & Corroon LLP
Hercules Plaza – Sixth Floor
1313 North Market Street
Wilmington, DE 19899-0951
(302) 984-6000
rhorwitz@potteranderson.com
dmoore@potteranderson.com

810412 / 32031

EXHIBIT A

U.S. District - California Central	8:94cv378	Papst Licensing GMBH v. Western Digital Corp	04/18/1994	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - California Central	2:94cv2538	Papst Licensing GMBH v. Micropolis Corp	04/19/1994	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - California Central	8:94cv482	Papst Licensing GMBH v. Micropolis Corp	05/17/1994	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Illinois Northern	1:95cv7280	Papst Licensing GMBH v. Taskawa Elec Corp, et al	12/08/1995	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - District of Columbia	1:96cv634	Comair Rotron, Inc v. Papst Licensing GMBH	03/29/1996	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Illinois Northern	1:96cv4585	Papst Licensing GMBH v. May Tie Corp	07/25/1996	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - District of Columbia	1:97cv590	Minebea Co, Ltd, et al v. Papst, et al	03/25/1997	NOS: (830) Patent; Cause: Declaratory Judgement
U.S. District - Illinois Northern	1:98cv4708	Papst Licensing GMBH v. Fujitsu Ltd, et al	07/30/1998	NOS: (830) Patent; Cause: Personal Injury
U.S. District - Illinois Northern	1:98cv4709	Papst Licensing GMBH v. Matsushita Elec Ind, et al	07/30/1998	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - California Northern	3:98cv3827	Papst Licensing v. Fujitsu Limited, et al	10/02/1998	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - California Northern	4:99cv1319	Papst Licensing v. Maxtor Corporation	03/18/1999	NOS: (830) Patent; Cause: Fed. Question
U.S. District - Delaware	1:99cv395	Hewlett-Packard Co v. Papst Licensing GMBH, et al	06/22/1999	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Louisiana Eastern	2:99md1298	In Re: Papst Licensing GMBH v.	10/13/1999	NOS: (830) Patent; Cause: Multidistrict Litigation
U.S.	2:99cv3119	Hewlett-Packard Co v. Papst	10/26/1999	NOS: (830) Patent;

District - Louisiana Eastern		Licensing GMBH, et al		Cause: Patent Infringement
U.S. District - Louisiana Eastern	2:99cv3117	Papst Licensing GMBH v. Maxtor Corporation	10/29/1999	NOS: (830) Patent; Cause: Fed. Question
U.S. District - Louisiana Eastern	2:99cv3116	Papst Licensing GMBH v. Fujitsu Limited, et al	11/15/1999	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Louisiana Eastern	2:99cv3118	Minebea Co Ltd, et al v. Papst, et al	11/15/1999	NOS: (830) Patent; Cause: Declaratory Judgement
U.S. District - Illinois Northern	1:00cv6143	Papst Licensing GMBH v. May Jie Corp, et al	10/05/2000	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Louisiana Eastern	2:00cv3760	Papst Licensing GMBH v. Intl Bus Machines	12/26/2000	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Illinois Northern	1:02cv927	Papst Licensing GMBH v. DC Chem Co Ltd, et al	02/06/2002	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Illinois Northern	1:02cv2594	Papst Licensing GMBH v. Marvelous Technology, et al	04/10/2002	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - California Central	8:02cv650	Papst Licensing GMBH v. Western Digital Corp, et al	07/15/2002	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Illinois Northern	1:02cv5485	Papst Licensing GMBH v. Benq Corp, et al	08/02/2002	NOS: (830) Patent; Cause: Federal Question
U.S. District - Georgia Northern	1:02cv2808	Lite-on It Corp v. Papst Licensing GMBH	08/20/2002	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Georgia Northern	1:02cv3419	Lite-on It Corp v. Papst Licensing GMBH	12/19/2002	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Illinois Northern	1:03cv1001	Papst Licensing GMBH v. Stnonwealth Elec, et al	02/11/2003	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Illinois Northern	1:03cv1002	Papst Licensing GMBH v. Samsung Electro	02/11/2003	NOS: (830) Patent; Cause: Patent Infringement

U.S. District - Louisiana Eastern	2:02cv3750	Papst Licensing GMBH v. Wstrn Digital Corp et al	02/18/2003	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - California Northern	5:04cv2585	Aopen Inc et al v. Papst Licensing et al	06/28/2004	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - California Northern	3:05cv3880	Papst Licensing GMBH & Co KG v. Cornice, Inc et al	09/26/2005	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Louisiana Eastern	2:05cv6338	Papst Licensing GMBH & Co KG v. Cornice, Inc et al	12/15/2005	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - Michigan Eastern	2:06cv14094	Volkswagen of America, Incorporated v. Papst Licensing GMH and Company K	09/18/2006	NOS: (830) Patent; Cause: No cause code entered
U.S. District - District of Columbia	1:06cv1751	Casio Inc v. Papst Licensing GMBH & Co KG	10/16/2006	NOS: (830) Patent; Cause: Declaratory Judgement
U.S. District - Illinois Northern	1:07cv3401	Papst Licensing GMBH & Co KG v. Funrim Corporation et al	06/15/2007	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - District of Columbia	1:07cv1118	Fujifilm Corporation et al v. Papst Licensing GMBH & Co KG	06/21/2007	NOS: (830) Patent; Cause: Declaratory Judgement
U.S. District - Delaware	1:07cv415	Papst Licensing GMBH & Co KG v. Olympus Corporation et al	06/26/2007	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - California Central	2:07cv4249	Papst Licensing GMBH & Co KG v. Samsung Techwin Co et al	06/28/2007	NOS: (830) Patent; Cause: Patent Infringement
U.S. District - District of Columbia	1:07cv1222	Matsushita Electric Industrial Co, Ltd et al v. Papst Licensing GMBH & Co K	07/06/2007	NOS: (830) Patent; Cause: Patent Infringement

EXHIBIT B

IP LAW360

Portfolio Media, Inc. | 648 Broadway, Suite 200 | New York, NY 10012 | www.law360.com
Phone: +1 212 537 6331 | Fax: +1 212 537 6371 | customerservice@portfoliomedia.com

Papst Defeats Minebea In Long-Running Patent Dispute

Wednesday, August 23, 2006 — A federal judge has dismissed $500 million in claims against Papst Licensing GmbH & Co. KG, which was sued by one-time partner Minebea Co. Ltd. on charges of conversion, breach of contract, patent exhaustion and patent misuse.

In a 276-page decision, Judge Paul L. Friedman of the U.S. District Court in Washington, D.C., ruled that Papst, a German company with a number of patents related to computer hard disk drives and hard disk drive spindle motors, used proper licensing practices in its dealings with Japan-based Minebea.

"Minebea has failed to prove its case on each claim by a preponderance of the evidence," Friedman wrote in his Aug. 17 opinion. "Furthermore...in some cases Minebea's legal theories are far-fetched and have either little or no basis in law or no relevance to the contracts, agreements and understandings of the parties in this case."

The case goes back to 1990, when the two companies entered into a joint venture to design, manufacture and sell improved hard disk drive motors. As part of the deal, Papst granted licenses to Minebea and agreed not to sue if Minebea violated any of Papst's patents.

When the joint venture dissolved in 1993, the two sides then entered into numerous written agreements. Minebea first sued Papst in 1997 in the Washington, D.C., district court, alleging that Papst "misled Minebea and its customers to believe that Papst would not enforce its so called drive patents against Minebea's customers."

Due to consolidations, added and dropped claims and switches of venue, the case dragged on until this month, when Friedman ruled in Papst's favor.

"The court finds...that Minebea's claims are overblown and not supported by the language of the agreement," Friedman wrote.

After the decision was announced, Papst founder and president Georg Papst said, "This is as much a personal victory as it is a victory for our company. Minebea tried to destroy our licensing program and called into question almost every aspect of my business life in the past 15 years. To receive such an overwhelmingly positive ruling from the judge is complete vindication."

"We thoroughly defeated all of Minebea's claims even though Minebea threw an army of lawyers against us and spent tens of millions of dollars on its case," added Jerold B. Schnayer, Papst's principal outside attorney. "This

All Content Copyright 2006, Portfolio Media, Inc.

was a long and bruising seven-week trial that was incredibly international in scope, involving testimony on three continents."

Previously, Papst had sued all the major hard disk drive manufacturers, including IBM, Seagate, Western Digital, Hitachi, Fujitsu and Toshiba, for patent infringement. Since then, it has entered into licensing agreements with most of them.

Minebea, on the other hand, supplies the major hard disk manufactures with hard disk drive spindle motors.

Papst is represented in the case by Welsh & Katz, Ltd.

Minebea is represented by Schulte, Roth & Zabell LLP.

The case is Minebea Co. Ltd. et al. v. Papst et al., case number 1:97-cv-00590, in the U.S. District Court for the District of Columbia.

--By Jesse Greenspan
jesse.greenspan@portfoliomedia.com

All Content Copyright 2006, Portfolio Media, Inc.

EXHIBIT C

FILED
OCT 16 2006
NANCY MAYER WHITTINGTON, CLERK
U.S. DISTRICT COURT

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CASIO INC.
570 Mount Pleasant Avenue
Dover, New Jersey 07801

Plaintiff,

-against-

PAPST LICENSING GMBH & CO. KG
Bahnhofstr. 33
78112 St. Georgen
Germany

Defendant.

COMPLAINT

CASE NUMBER 1:06CV01751
JUDGE: Gladys Kessler
DECK TYPE: General Civil
DATE STAMP: 10/16/2006

JURY ACTION

Plaintiff Casio, Inc. ("Casio"), for its Complaint against Defendant Papst Licensing GmbH & Co. KG ("Papst Licensing"), alleges and states as follows:

NATURE OF ACTION

1. This action arises under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202 and the patent laws of the United States, Title 35 U.S.C. § 1 et seq.

THE PARTIES

2. Casio is a New York corporation in the business of, among other things, selling electronic goods, with its principal place of business located at 570 Mount Pleasant Avenue, Dover, New Jersey 07801.

3. On information and belief, Defendant Papst Licensing is a German partnership in the business of licensing, enforcing, and commercializing U.S. Patents and other forms of

intellectual property, with its principal place of business located at Bahnhofstrasse 33, 78112 St. Georgen, Germany.

JURISDICTION AND VENUE

4. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338.

5. This Court has personal jurisdiction over Papst Licensing pursuant to 35 U.S.C. § 293.

6. Venue is proper in this judicial district at least pursuant to 28 U.S.C. § 1391(c).

GENERAL ALLEGATIONS

7. Casio imports, markets and sells electronic goods in the United States including digital cameras.

8. On information and belief, Papst Licensing owns various United States patents, has filed numerous patent infringement suits in the United States to enforce its rights under those patents, and has negotiated numerous license agreements with a variety of United States companies relating to those patent rights.

9. Papst Licensing claims to be the owner of U.S. Patent Nos. 6,895,449 ("the '449 patent") and 6,470,399 ("the '399 patent").

10. Papst Licensing has accused Casio of infringing upon both the '449 and '399 patents. For example, in a letter dated March 14, 2006, Papst Licensing accused Casio of infringing the '449 and '399 patents. Papst Licensing has repeated its accusations on numerous occasions since that time.

11. Casio responded with a detailed analysis of why it does not infringe the '449 patent or the '399 patent.

12. Notwithstanding, Papst Licensing demanded, among other things, that Casio pay it royalties for the use of the '449 and '399 patents in Casio's digital cameras that have been sold in the United States. Papst Licensing offered to license the '449 and '399 patents to Casio. Casio has rejected Papst Licensing's demands for payment of royalties and Papst Licensing's offer to license its '449 and '399 patents.

13. Papst Licensing has asserted and continues to assert, that the '449 and '399 patents are infringed by Casio.

COUNT ONE

DECLARATORY JUDGMENT OF NON-INFRINGEMENT AND INVALIDITY OF THE '449 PATENT

14. Casio repeats and realleges the averments of paragraphs 1-13 as if fully set forth herein.

15. There is an actual controversy between Casio and Papst as to the infringement and the validity of the '449 patent.

16. Casio has not infringed and does not infringe the '449 patent.

17. The '449 patent is invalid for failure to comply with the patent laws of the United States, including the requirements of 35 U.S.C. §§ 102, 103, and/or 112.

COUNT TWO

DECLARATORY JUDGMENT OF NON-INFRINGEMENT AND INVALIDITY OF THE '399 PATENT

18. Casio repeats and realleges the averments of paragraphs 1-17 as if fully set forth herein.

19. There is an actual controversy between Casio and Papst as to the infringement and the validity of the '399 patent.

20. Casio has not infringed and does not infringe the '399 patent.

21. The '399 patent is invalid for failure to comply with the patent laws of the United States, including the requirements of 35 U.S.C. §§ 102, 103, and/or 112.

JURY DEMAND

22. Casio demands a trial by jury.

PRAYER FOR RELIEF

WHEREFORE Plaintiff Casio Inc. respectfully requests that the Court enter judgment against Papst Licensing GMbH & Co. KG, including:

a. a declaration that Casio Inc. has not infringed, and is not infringing the '449 and '399 patents;

b. a declaration that each of the claims of the '449 and '399 patents are invalid;

c. an injunction prohibiting Papst Licensing from alleging infringement of the '449 and '399 patents by Casio Inc.;

d. an award of damages Casio Inc. has sustained;

e. a declaration that this case is an "exceptional case" within the meaning of 35 U.S.C. § 285 due to, *inter alia*, the above actions of Papst Licensing;

f. an award of costs and attorneys fees and other expenses Casio Inc. has been forced to incur; and

g. such further relief as the Court may deem just and proper.

October 13, 2006

Respectfully submitted:

J. Kevin Fee (Bar No. 494016)
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004
Tel.: (202) 739-3000
Fax: (202) 739-3001

Attorney for Plaintiff
Casio Inc.

EXHIBIT D

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CASIO INC., 570 Mount Pleasant Avenue, Dover, New Jersey 07801

Plaintiff,

v.

PAPST LICENSING GMBH & CO. KG, Bahnhofstrasse 33, 78112 St. Georgen, Germany

Defendant.

Civil Action No. 1:06 CV 01751

Judge: Gladys Kessler

PAPST LICENSING GMBH & CO. KG, Bahnhofstrasse 33, 78112 St. Georgen, Germany

Counter-Plaintiff

v.

CASIO INC., 570 Mount Pleasant Avenue, Dover, New Jersey 07801, and CASIO COMPUTER CO., LTD., 6-2, Honmachi 1-chome, Shibuya-ku, Tokyo 151-8543, Japan

Counter-Defendants

PAPST LICENSING GmbH & Co. KG's ANSWER, COUNTERCLAIM AND JURY DEMAND

Defendant, Papst Licensing GmbH & Co. KG ("Papst Licensing"), answers the Complaint of Plaintiff, Casio Inc., as follows:

NATURE OF ACTION

1. This action arises under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202 and the patent laws of the United States, Title 35 U.S.C. § 1 et seq.

ANSWER: This paragraph contains Casio Inc.'s characterization of its action and to which no answer is required, but insofar as an answer is required, denied.

THE PARTIES

2. Casio is a New York corporation in the business of, among other things, selling electronic goods, with its principal place of business located at 570 Mount Pleasant Avenue, Dover, New Jersey 07801.

ANSWER: Papst Licensing states that it is without knowledge or information sufficient to form a belief as to the truth of these averments in this paragraph.

3. On information and belief, Defendant Papst Licensing is a German partnership in the business of licensing, enforcing, and commercializing U.S. Patents and other forms of intellectual property, with its principal place of business located at Bahnhofstrasse 33, 78112 St. Georgen, Germany.

ANSWER: Papst Licensing admits that it is in the business of licensing and enforcing certain U.S. Patents and that it has a principal place of business located at Bahnhofstrasse 33, 78112 St. Georgen, Germany, but states that it is without knowledge or information sufficient to form a belief as to the truth of the remaining averments in this paragraph.

JURISDICTION AND VENUE

4. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338.

ANSWER: Admit.

5. This Court has personal jurisdiction over Papst Licensing pursuant to 35 U.S.C. § 293.

ANSWER: Admit.

6. Venue is proper in this judicial district at least pursuant to 28 U.S.C. §1391(c).

ANSWER: Admit.

GENERAL ALLEGATIONS

7. Casio imports, markets and sells electronic goods in the United States including digital cameras.

ANSWER: Papst Licensing states that it is without knowledge or information sufficient to form a belief as to the truth of these averments in this paragraph.

8. On information and belief, Papst Licensing owns various United States patents, has filed numerous patent infringement suits in the United States to enforce its rights under those patents, and has negotiated numerous license agreements with a variety of United States companies relating to those patent rights.

ANSWER: Papst Licensing admits that it owns a number of United States patents, has filed a number of patent infringement suits in the United States to enforce its rights under those patents, and has negotiated a number of license agreements with a number of United States companies relating to those patent rights, but states that it is without knowledge or information sufficient to form a belief as to the truth of the remaining averments in this paragraph.

9. Papst Licensing claims to be the owner of U.S. Patent Nos. 6,895,449 ("the '449 patent") and 6,470,399 ("the '399 patent").

ANSWER: Admit.

10. Papst Licensing has accused Casio of infringing upon both the '449 and '399 patents. For example, in a letter dated March 14, 2006, Papst Licensing accused Casio of infringing the '449 and '399 patents. Papst Licensing has repeated its accusations on numerous occasions since that time.

ANSWER: Admit.

11. Casio responded with a detailed analysis of why it does not infringe the '449 patent or the '399 patent.

ANSWER: Denied.

12. Notwithstanding, Papst Licensing demanded, among other things, that Casio pay it royalties for the use of the '449 and '399 patents in Casio's digital cameras that have been sold in the United States. Papst Licensing offered to license the '449 and '399 patents to Casio. Casio has rejected Papst Licensing's demands for payment of royalties and Papst Licensing's offer to license its '449 and '399 patents.

ANSWER: Admit.

13. Papst Licensing has asserted and continues to assert, that the '449 and '399 patents are infringed by Casio.

ANSWER: Admit.

COUNT ONE
DECLARATORY JUDGMENT OF
NON-INFRINGEMENT AND INVALIDITY
OF THE '449 PATENT

14. Casio repeats and realleges the averments of paragraphs 1-13 as if fully set forth herein.

ANSWER: Papst Licensing incorporates its responses to paragraphs 1-13 as if fully set forth herein.

15. There is an actual controversy between Casio and Papst as to the infringement and the validity of the '449 patent.

ANSWER: Admit.

16. Casio has not infringed and does not infringe the '449 patent.

ANSWER: Denied.

17. The '449 patent is invalid for failure to comply with the patent laws of the United States, including the requirements of 35 U.S.C. §§ 102, 103, and/or 112.

ANSWER: Denied.

COUNT TWO
DECLARATORY JUDGMENT OF
NON-INFRINGEMENT AND INVALIDITY
OF THE '399 PATENT

18. Casio repeats and realleges the averments of paragraphs 1-17 as if fully set forth herein.

ANSWER: Papst Licensing incorporates its responses to paragraphs 1-17 as if fully set forth herein.

19. There is an actual controversy between Casio and Papst as to the infringement and the validity of the '399 patent.

ANSWER: Admit.

20. Casio has not infringed and does not infringe the '399 patent.

ANSWER: Denied.

21. The '399 patent is invalid for failure to comply with the patent laws of the United States, including the requirements of 35 U.S.C. §§ 102, 103, and/or 112.

ANSWER: Denied.

JURY DEMAND

22. Casio demands a trial by jury.

ANSWER: This paragraph contains Casio Inc.'s characterization of its jury demand and to which no answer is required.

WHEREFORE, Papst Licensing prays for relief as set forth below:

A. Declare that Casio Inc. has infringed the '449 patent and '399 patent;

B. Declare that the '449 patent and '399 patent are valid;

B. Award Papst Licensing interest, costs, and attorney's fees; and

C. Award Papst Licensing such other and further relief, as this Court deems just and appropriate.

PAPST LICENSING'S COUNTERCLAIM

Papst Licensing for its counterclaim for patent infringement against Casio Inc. and Casio Computer Co., Ltd., states as follows:

Parties

23. Papst Licensing is a corporation existing under the laws of The Federal Republic of Germany, and has a principal place of business at Bahnhofstrasse 33, 78112 St. Georgen, Germany.

24. Casio Inc. has alleged that it is a New York corporation in the business of, among other things, selling electronic goods, with its principal place of business located at 570 Mount Pleasant Avenue, Dover, New Jersey 07801.

25. Upon information and belief, Casio Computer Co., Ltd. is a corporation existing under the laws of Japan, and has a principal place of business at 6-2, Honmachi 1-chome, Shibuya-ku, Tokyo 151-8543, Japan.

Jurisdiction And Venue

26. This Court has federal question jurisdiction of this counterclaim pursuant to 28 U.S.C. §1331 and 1338(a) because this counterclaim arises under the patent laws of the United States. 35 U.S.C. §§ 1, et seq.

27. Venue over Casio Inc. and Casio Computer Co., Ltd. is proper in this district pursuant to 28 U.S.C. §§ 1391(c) and 1400(b).

Patents At Issue

28. Papst Licensing is the lawful owner, by assignment, of the entire right, title, and interest in and to the United States Patents identified in paragraphs 29-30.

29. United States Patent No. 6,895,449 ("the '449 patent") was duly and legally issued on May 17, 2005.

30. United States Patent No. 6,470,399 ("the '399 patent") was duly and legally issued on October 22, 2002.

Claim for Relief

31. Papst Licensing repeats and realleges each and every allegation in the foregoing paragraphs as though fully set forth herein.

32. Upon information and belief, Casio Inc. and Casio Computer Co., Ltd. have or have caused to be made, used, sold, or offered for sale to customers in the United States, or imported into the United States, products that embody the elements of one or more claims of the '449 and '399 patents and, therefore, infringe those patents under the U.S. patent laws, 35 U.S.C. §271.

33. Upon information and belief, a reasonable opportunity for further investigation is likely to provide evidentiary support that Casio Inc. and Casio Computer Co., Ltd. committed the said infringements willfully.

34. Upon information and belief, Casio Inc. and Casio Computer Co., Ltd. have been and still are committing the said infringements and will continue to do so unless enjoined by this Court.

35. These actions by Casio Inc. and Casio Computer Co., Ltd. have damaged Papst Licensing in an amount to be determined at trial and have caused, and will continue to cause Papst Licensing irreparable injury for which Papst Licensing has no adequate remedy at law.

JURY DEMAND

Papst demands a trial by jury on all issues triable by jury as of right.

WHEREFORE, Papst Licensing prays for relief as set forth below:

A. Declare that Casio Inc. and Casio Computer Co., Ltd. have infringed the '449 patent and the '399 patent as set forth herein;

B. Order that Casio Inc. and Casio Computer Co., Ltd. and each of their employees, servants, agents, and persons in active concert with them be preliminarily and permanently enjoined from making, using, selling, or offering for sale products that infringe the '449 patent and the '399 patent;

C. Order the impounding for destruction all of Casio Inc.'s and Casio Computer Co., Ltd.'s products that infringe the '449 patent and the '399 patent;

D. Award Papst Licensing damages adequate to compensate for Casio Inc.'s and Casio Computer Co., Ltd.'s infringements;

E. Order that Papst Licensing be awarded monetary relief including:

(i) Compensatory damages in an amount to sufficiently compensate Papst Licensing for Casio Inc.'s and Casio Computer Co., Ltd.'s infringements;

(ii) All damages sustained by Papst Licensing as a result of Casio Inc.'s and Casio Computer Co., Ltd.'s acts of infringement; and

(iii) An increase of damages to three times the amount found or assessed;

F. Award Papst Licensing interest, costs, and attorney's fees; and

G. Award Papst Licensing such other and further relief, as this Court deems just and appropriate.

Dated: January 3, 2007

By: Campbell Killefer

Campbell Killefer (Bar. No. 268433)
VENABLE LLP
575 7th Street, NW
Washington, DC 20004
(202) 344-4000
(202) 344-8300 (fax)

Of Counsel:
Jerold B. Schnayer
Joseph B. Cwik
WELSH & KATZ, LTD.
120 South Riverside Plaza, 22nd Floor
Chicago, IL 60606
(312) 655-1500
(312) 655-1501 (fax)
Attorneys for Papst Licensing GmbH & Co. KG

CERTIFICATE OF SERVICE

I hereby certify that the foregoing was served upon the following counsel for Plaintiff and Counterclaim Defendant Casio Inc. by regular U.S. Mail, postage prepaid, this January 3, 2007:

J. Kevin Fee, Esq.
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

Scott D. Simpson, Esq.
Jeffrey M. Gold, Esq.
MORGAN, LEWIS & BOCKIUS LLP
101 Park Avenue
New York, NY 10178

Campbell Killefer

Campbell Killefer

EXHIBIT E

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CASIO INC.,	:	
	:	
Plaintiff,	:	
	:	
v.	:	Civil Action No. 06-1751 (GK)
	:	
PAPST LICENSING GMBH & CO. KG,	:	
	:	
	:	
Defendant.	:	

SCHEDULING ORDER

PLEASE READ THIS ORDER IN ITS ENTIRETY

This matter having come before the Court for an Initial Scheduling Conference, and the Court having considered the Joint Meet and Confer Statement submitted by counsel, as well as any supplemental pleadings that are relevant, the representations made in open court, and the entire record in the case, it is hereby

ORDERED that:

1. This case shall proceed with the following schedule:

Rule 26(a)(1) disclosures: **June 4, 2007**

Exchange Witness Lists: **June 15, 2007**

Deadline for Written Discovery Requests: **July 1, 2007**

Proponent's R. 26(a)(2) Statements: **February 15, 2008**

Opponent's R. 26(a)(2) Statements: **March 17, 2008**

Fact discovery closes: **December 11, 2007**

Expert discovery closes: **June 16, 2008**

Deposition of Experts to begin by: **March 18, 2008**

2. **This case is referred to Magistrate Judge Deborah Robinson for all discovery disputes including the pending Motion to Compel.**

3. A further status conference is scheduled for **December 4, 2007, at 10:00 a.m.** Counsel shall file a Joint Praecipe by **November 30, 2007,** informing the Court about the status of discovery.

4. Every pleading shall indicate, immediately below the Civil Action No. in the caption, **the next-scheduled Court deadline,** such as a status conference, or pretrial conference, or trial date. Pleadings that do not contain such information will be, sua sponte, stricken from the record.

5. Unless parties have been given leave to do so, **no** Opposition to a Motion shall include a new Motion. Every Motion must be filed **separately** and **individually.**

6. Every pleading signed by an attorney shall, in conformity with Local Civil Rule 5.1(e), contain the name, address, **telephone number,** fax number, and bar identification number of the attorney.

7. Any motion that does not comply with Local Civil Rule 7.1(c) or (m) will be, sua sponte, denied.

8. Any pending dispositive motions will be automatically denied as moot when and if the Complaint upon which they are based is superseded by an Amended Complaint. Parties shall not

reference, rely on, or incorporate such denied motions in any subsequent dispositive motions filed in response to an Amended Complaint.

9. Every motion for continuance shall indicate the **date a pleading is due, the date requested for the continuance**, whether previous continuances have been granted, and whether the extension will impact any other court dates. Failure to provide such information will result in denial of the motion.

10. The parties **do/do not** consent to proceed before a magistrate judge for all purposes, including trial.

11. There will be no extensions of discovery, except for compelling reasons. Each party is limited to a maximum of 10 depositions and 25 interrogatories.

12. No discovery motion may exceed 10 pages in length. Oppositions may not exceed 10 pages in length; replies may not exceed 5 pages.

13. **Three weeks** in advance of the Pretrial Conference, counsel are required to meet and prepare a **Joint** Pretrial Statement, which is required to be submitted not less than **eleven days** prior to the Conference in accordance with Local Civil Rule 16.5(b). The form for the Joint Pretrial Statement is attached hereto as Appendix A. Separate Pretrial Statements will be struck, sua sponte.

14. Motions for reconsideration are greatly disfavored and should not exceed 10 pages in length. Motions in excess of these page limits will be struck, sua sponte. Oppositions may not exceed 10 pages in length; replies may not exceed 5 pages. The Court assumes that counsel have made their best and most convincing arguments in their first round of briefing, and presumes that motions for reconsideration are simply a repetition and reframing of those original arguments. "Only if the moving party presents new facts or a clear error of law which 'compel' a change in the Court's ruling will the motion to reconsider be granted". New York v. United States, 880 F. Supp. 37,38 (D.D.C. 1995)(emphasis added).

15. Counsel's attention is called to Appendix B, which contains five specific "guidelines" for the proper conduct of depositions under Fed. R. Civ. P. 30(d), prohibiting argumentative and suggestive objections, and requiring answers to all questions, regardless of objections except when necessary to preserve a privilege. Violations of this rule will be sanctioned.

16. Counsel are admonished to read the Circuit's opinion in Jackson v. Finnegan, Henderson, Farabow, Garrett & Dunner, et al., 101 F.3d 145, 149-153 (D.C. Cir. 1996)(in upholding the trial court's implementation of the scheduling order entered at the beginning of the case and insisting on its reasonable observance

during litigation, affirming the grant of summary judgment because of failures to comply with Local Rule 7.1(h)).

5/14/07

/s/
Gladys Kessler
United States District Judge

APPENDIX A

[Form of Joint Pretrial Statement to be Filed Eleven Days before Pretrial Conference]

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CASIO INC.,	:	
	:	
Plaintiff,	:	
	:	
v.	:	Civil Action No. 06-1751 (GK)
	:	
PAPST LICENSING GMBH & CO. KG,	:	
	:	
Defendant.	:	

JOINT PRETRIAL STATEMENT

1. Parties and Counsel: Names, addresses, and telephone numbers of all parties and counsel on whose behalf this Statement is filed.

2. Nature of the Case: Give a brief statement describing the nature of the case, the identities of the parties, and the basis of the court's jurisdiction. The statement of the case should be sufficiently brief, clear, and non-argumentative to be suitable for reading to the jury.

3. Claims and/or Defenses: Give a statement of claims setting forth, concisely, each party's claims against any other party (including counter-, cross-, and third-party claims) and the party or parties against whom the claim is made. The statement of defenses shall set forth each defense a party interposes to a claim asserted against it by any other party, including defenses raised by way of general denial, without regard to which party has the burden of persuasion.

4. Undisputed Issues/Stipulations: List all issues not in dispute or facts to which the parties have stipulated.

5. Witness Schedule: List the name, address, and telephone number of each witness scheduled to be called by a party, including rebuttal witnesses. The schedule shall also set forth

a brief description of the testimony to be given by the witness, and an estimate of the time necessary for direct examination. Opinion witnesses shall be designated by an asterisk. Witnesses called for impeachment purposes only need not be listed. However, no party may call at trial any witness not listed (except for impeachment purposes) on their Pretrial Statement.

6. **Exhibit List:** Describe each exhibit to be offered in evidence, with each exhibit identified by number, title, and date (if applicable). No exhibit will be admitted at trial unless it is listed on the Pretrial Statement. All exhibits listed will be deemed admitted at trial unless a specific objection is made in the Joint Pretrial Statement.

7. **Deposition Testimony:** Identify each deposition or portion thereof (by page and line numbers) the party intends to offer in evidence. Any cross-designation sought by any other party must be made at or before the final Pretrial Conference.

8. **Relief Sought:** Set forth separately each element of damages and the monetary amount claimed, including prejudgment interest, punitive damages, and attorneys' fees. Do not include amounts claimed for intangible damages. Set forth all other types of relief sought against any party.

9. **Pending Motions:** List all pending motions showing title and filing date.

10. **Demonstrative Evidence, Physical Evidence, Videotapes:** Describe all such items to be offered at trial. Any objections must be made in the Joint Pretrial Statement.

11. **Jury Cases:** Submit list of requested voir dire questions, showing those agreed upon and not agreed upon; submit list of standard instructions showing those agreed upon and not agreed upon; submit complete text of non-standard instructions with authorities relied upon; submit text of verdict form, including any special interrogatories.

12. **Non-Jury Cases:** Submit detailed proposed findings of fact and conclusions of law with supporting authorities.

13. **Estimated Length of Trial:** List number of days, and any scheduling problems with witnesses.

14. **Miscellaneous Matters:**

The following should be included after the signatures of counsel:

The foregoing Joint Pretrial Statement, as revised at the Pretrial Conference in the presence of counsel, shall stand as the Pretrial Order in this case.

_____
DATE

_____
Gladys Kessler
U.S. District Judge

APPENDIX B

DEPOSITION GUIDELINES

1. Counsel for the deponent shall refrain from gratuitous comments and directing the deponent in regard to times, dates, documents, testimony, and the like.

2. Counsel shall refrain from cuing the deponent by objecting in any manner other than stating an objection for the record followed by a word or two describing the legal basis for the objection.

3. Counsel shall refrain from directing the deponent not to answer any question submitted unless the question calls for privileged information.

4. Counsel shall refrain from dialogue on the record during the course of the deposition.

5. If counsel for any party of person given notice of the deposition believes that these conditions are not being adhered to, that counsel may call for suspension of the deposition and then immediately apply to the Court for an immediate ruling and remedy. Where appropriate, sanctions will be imposed.

6. All counsel are to conduct themselves in a civil, polite, and professional manner.

Judge Kessler
(Revised 3/26/97)

EXHIBIT F

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CASIO, INC.,	:	
	:	
Plaintiff,	:	
	:	
v.	:	**Civil Action No. 06-1751 (GK)**
	:	
PAPST LICENSING GMBH & CO. KG,	:	
	:	
	:	
Defendant.	:	

ORDER

Upon consideration of the Motion of Papst Licensing GmbH & Co. KG for a stay of all proceedings relating to the alleged infringement of its patents, pending a consolidated determination by the MDL Panel, the Court concludes that it is in the interest of judicial economy and efficiency to grant the Motion. Papst requested expedited consideration because of the imminence of a discovery motions hearing on July 23, 2007 before Magistrate Judge Robinson. That request for expedited consideration is being **granted**. Papst has also requested that the Court set a status conference for July 23, 2007 to resolve certain case management issues. The Court will be in trial on that date and, therefore, a status conference is not possible. What is more, it makes no sense to hold a status conference until after the MDL Panel rules.

WHEREFORE, it is this 17th day of July, 2007, hereby

ORDERED, that Papst's Motion [Dkt. #71] for Expedited Consideration is **granted**; and it is further

ORDERED, that Papst's Motion to Stay Proceedings [Dkt. #69] is **granted**; and it is further

ORDERED, that Papst's request for a Status Conference on July 23, 2007 is **denied**; and it is further

ORDERED, that the parties are to inform the Court of the decision of the MDL Panel within 48 hours of their receiving notice of any such decision.[1]

/s/
Gladys Kessler
United States District Judge

Copies via ECF to all counsel of record

[1] The Court is aware that the other parties have not had an opportunity to file any opposition to Papst's Motion. If it is absolutely necessary for a party to convey its opposition to the Motion, it may do so in a pleading of no longer than two full pages using 12 point type.

EXHIBIT G

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

In the Matter of:	:	
CASIO, INC.,	:	
Plaintiff,	:	
vs.	:	Civil Action No. 06-1751
PAPST LICENSING GMBH & CO.,	:	
Defendant.	:	
	:	Washington, D.C.
	:	May 31, 2007

TRANSCRIPT OF MOTIONS HEARING
BEFORE THE HONORABLE DEBORAH A. ROBINSON
UNITED STATES MAGISTRATE JUDGE

APPEARANCES:

For the Plaintiff: J. KEVIN FEE, ESQ.
SCOTT D. STIMPSON, ESQ.

For the Defendant: JEROLD B. SCHNAYER, ESQ.
DAMON W.D. WRIGHT, ESQ.

Proceedings recorded by the Court, transcript produced by Pro-Typists, Inc., 1012-14th Street, N.W., Suite 307, Washington, D.C. 20005, 202-347-5395, www.pro-typists.com
M1837V/bf

PROCEEDINGS

THE CLERK: Civil Case Number 06-1751. This is in the matter of Casio, Inc. versus Papst Licensing GMBH & Company. I don't know what the "KG" is. I have that on our archive. Kevin Fe and Scott D. Stimpson for the Plaintiffs; Jerold B. --

MR. SCHNAYER: "Schnayer."

THE CLERK: -- Schnayer and Damon Wright for the Defendant. This is set for a motions hearing.

THE MAGISTRATE JUDGE: Now, good afternoon to all of you. This matter was scheduled for a hearing on the motion filed by Casio, to compel and for sanctions.

The issue presented by the motion is a relatively straightforward one, and the Court indeed considered ruling on the motion without scheduling a hearing. But recognizing that the status of the issue presented might have changed as of the time the Court made a ruling had there been no hearing, the Court thought it prudent for counsel to come in and address the matter.

I understand, based upon your informal discussion off the record my law clerk before the case was called, that it may be the case that some responses to the outstanding interrogatories have been served. However, recognizing that that may not fully address the pending motion, the Court will hear first from Plaintiff's counsel, then from counsel

for the Defendant, regarding these issues.

Now, who will address the matter on behalf of the Plaintiff?

MR. STIMPSON: I will, Your Honor. Scott Stimpson.

THE MAGISTRATE JUDGE: Mr. Stimpson, good afternoon.

MR. STIMPSON: Good afternoon, and thank you. I will be brief.

We were served last night with responses to interrogatories and document requests. There are many objections. We still have not received a single document in document production.

I think it would help just to have a very short recitation of the chronology as things have played out here.

On March 2 we had what we believed to be our 26(f) conference and we served our discovery requests. We served a proposed discovery plan on the other side on March 9. It was more than six weeks later before we got any comments from the other side after this motion was filed.

On March 13, Judge Kessler issued an order that discovery proceed.

Exhibit J to our motion is a letter we sent to opposing counsel shortly before their responses were due, which I think is instructive here. We were getting wind

that -- it's "J," Your Honor. We were getting wind that perhaps they were not going to respond on time, and we sent a letter telling them that Judge Kessler has ordered discovery to proceed and we expect full and appropriate responses, and if we don't get them we are going to take appropriate action.

So counsel for Papst took the risks they were taking with their eyes wide open to what might happen here.

It is now May 31. We are about three months since we served our discovery requests. We are two-and-a-half months after Judge Kessler ordered discovery to proceed. We do not have a single document. And the responses we received last night are riddled with objections.

THE MAGISTRATE JUDGE: May I ask you to state the substance of some of the objections. In other words, what sort of objections were raised.

MR. STIMPSON: I only received them last night, so I went over them briefly today, Your Honor.

The objections to the document requests -- they have objections on a protective order, they have objections on over-breadth, they have, you know, your typical objections you'd expect, privilege and work product.

Some of the document requests, they say they will give us some documents at some unspecified date. Some of the document requests, they simply -- if I remember

correctly, they simply say, "No," or "We'll think about it. We'll talk to you at some other time." Or, "We'll have a meet and confer, and discuss it."

But as I say, we have yet to receive a single document, and the case has been going for three months now - discovery has been going for three months.

THE MAGISTRATE JUDGE: What is your proffer regarding whether or not any agreement was reached with respect to objections?

MR. STIMPSON: I believe no agreement was reached -- absolutely none.

THE MAGISTRATE JUDGE: Very well, you may continue.

MR. STIMPSON: So, Your Honor, my opponent is trying to make this into a 26(f) issue. 26(f) is long since done, and this is not a 26(f) issue. This is a 26(d) issue. This is about a failure to respond to the Court order. 26(d) says that discovery can proceed regardless of whether there's been a 26(f) conference if the Court orders it, and unquestionably the Court ordered it.

So the question, I think, or the consequences of what's happened here, it's very clear that the Court order has been -- they have not complied with the Court order. And so we request basically four remedies for that.

One is, since the objections are untimely, they

are waived. That we get prompt discovery, including all the documents that should have been produced. We also request our fees and costs under 37(a) and (b).

THE MAGISTRATE JUDGE: And by "fees and costs," may I assume you mean fees and costs associated with the filing of the motion?

MR. STIMPSON: Correct. Correct. And lastly, Your Honor, I think an appropriate sanction in this situation would be entry of an order bifurcation. I think, for one thing, it's going to avoid another motion which may be coming, and bifurcation is particularly appropriate in this case.

Judge Kessler has asked that fact discovery be completed by December, December of this year. We've now had three months of our fact discovery period go by. We haven't received a single document. We've now just got six months left. And if damages and willfulness are left in this case, it is going to be darn near impossible to get this done pursuant to Judge Kessler's order. And it's a particularly appropriate sanction here, Your Honor, because they're effectively using the 26(f) procedures as a shield to prevent themselves from having to comply with the CRA.

So if there are no questions, I'll turn it over to my opponent.

THE MAGISTRATE JUDGE: Well, I do have one

additional question, Mr. Stimpson. Is your request for what you term "bifurcation" a request for a sanction or is it simply your view that, given the delay in making discovery that discovery cannot be completed in the time for which the Court already provided.

MR. STIMPSON: Well, it's both actually, Your Honor. We've cited cases where, in fact, one Court specifically mentioned entering a scheduling order by opposing party if they didn't comply with the Court orders. It's certainly an appropriate sanction for what's happened here.

But stepping back and just looking at where we are now, and we've got six more months of fact discovery, it's a very complicated case, even liability-wise. We've got two patents, we've got many accused products, we've got lots and lots of prior art. I assume there will be many accused claims of each patent that are alleged to be infringed. It is going to be a mountain for a jury. And if you add damages and willfulness to that, it is going to be a very lengthy trial and I can't see how we can really get it done in time.

So there are many reasons for bifurcation. I will leave that argument for another day, if it's needed. But a short answer to your question is, as a sanction and because it's appropriate, we request bifurcation.

THE MAGISTRATE JUDGE: Very well. Thank you very much, Mr. Stimpson.

MR. STIMPSON: Thank you.

THE MAGISTRATE JUDGE: Mr. Schnayer?

MR. SCHNAYER: Yes, Your Honor.

THE MAGISTRATE JUDGE: Very well. Good afternoon.

MR. SCHNAYER: Good afternoon. Nice to see you again.

Your Honor, first of all, let me make it clear we did serve discovery responses, and I would like to point out that the -- I'm going to hand up a copy -- they only have one copy, but I'd like to point out --

THE MAGISTRATE JUDGE: Let me interrupt you just one moment.

MR. SCHNAYER: Sure.

THE MAGISTRATE JUDGE: I don't believe that I need to see the responses. Let me ask whether you concede that service of any responses last night was well beyond the time in which --

MR. SCHNAYER: No, Your Honor.

THE MAGISTRATE JUDGE: -- the responses were due.

MR. SCHNAYER: Your Honor -- no.

THE MAGISTRATE JUDGE: When were you served with the discovery requests?

MR. SCHNAYER: We were served with the discovery

requests -- maybe I should go back and give you my version of what happened.

THE MAGISTRATE JUDGE: Well, let me ask when you were served with the discovery requests.

MR. SCHNAYER: On March 2nd, we were served with the discovery responses, Your Honor. And --

THE MAGISTRATE JUDGE: Discovery "requests."

MR. SCHNAYER: Discovery requests.

THE MAGISTRATE JUDGE: Very well. You may continue.

MR. SCHNAYER: Your Honor, in this case originally we had been having discussions about infringement charges. I'm going to go back to the beginning, because I think it needs to be understood. We've had discussions with Casio about charges of infringement we made against them concerning two patents that are involved in this lawsuit. They concern digital cameras. We had one meeting with them, never with their client, and my normal experience is we usually have five, ten meetings with companies and we discuss the issues. They decided to sue Papst, to bring a DJ action. So this case started as a DJ action.

We filed a counterclaim against them, and originally it was Casio USA involved, and we also sued Casio Japan. And when we sued Casio Japan we did so because it's our understanding that they manufacture the infringing goods

here.

And we had meetings with counsel before the Rule 26(f) conference that they claim happened, and we said to them, "Lookit, do you represent Casio Japan? Would you accept service of process for Casio Japan?"

And we were told, "We don't represent Casio Japan and we won't accept service of process for Casio Japan."

So we were forced to go through the Hague Convention. What that means is, since it's a foreign company we have to file a request with the Court, the Court files a request with the Justice Department, the Justice Department here files a request in Japan, and they serve the company, and eventually they got served.

And so a lot of delay that was caused in this case was caused by the Plaintiff in this case. They could have accepted services of process.

Now, we have this meeting, and we asked them to provide us with a draft before the meeting. We also asked them whether they represented Casio Japan. Because Casio Japan is a party. And they come to the meeting, we never got a draft of a proposal for the 26(f) scheduling order that we had to present to the Court -- they're the Plaintiff. And they come to the meeting and they say, "We don't represent Casio Japan."

So I said, "Well, how could we have a 26(f)

conference if you don't represent Casio Japan?"

And they said, "Well, we don't represent them. And we're not going to accept service of process."

Counsel wasn't at that conference. It lasted for about 15 minutes.

THE MAGISTRATE JUDGE: Do you agree, Mr. Schnayer, that there's no authority which holds that even the complete absence of a meet and confer session relieves a party of the time limits which otherwise apply to the service of responses to interrogatories and requests for production of documents?

MR. SCHNAYER: I don't. I think the rule is clear. I think you have --

THE MAGISTRATE JUDGE: What portion of the rule is it --

MR. SCHNAYER: 26(f) --

THE MAGISTRATE JUDGE: -- on which you rely?

MR. SCHNAYER: Okay. Yes. It says --

THE MAGISTRATE JUDGE: What portion are you reading?

MR. SCHNAYER: I'm in 26(d), Timing and Sequence of Discovery. "Except in categories of proceedings exempt from initial disclosure under Rule 26(a)(1)(E) or when authorized under these rules or by order of agreement of the parties, a party may not seek discovery from any source

before the parties have conferred as required by Rule 26(f)."

And then, Your Honor --

THE MAGISTRATE JUDGE: Doesn't the order of Judge Kessler, which directed that discovery proceed, mean that your reliance on that rule is misplaced?

MR. SCHNAYER: I don't think so, Your Honor, at all. It's not how I read the Judge's order.

Counsel asked that discovery be allowed to go forward. After we had that 15-minute conference, this so-called 26(f) conference, we met numerous times for many hours on the phone.

And when I saw the Judge's order, it was my understanding that we had to -- that discovery would go forward, but the Judge never said that you don't have to comply with 26(d). 26(d) is very specific. It says you have to have a 26(f) conference. That doesn't mean meet for 15 minutes and discovery goes forward. It means you're supposed to prepare a discovery plan. You're supposed to discuss the issues. And I have a section of the statute that -- I'm going to hand up a copy of this, if I may, Your Honor?

THE MAGISTRATE JUDGE: You need not hand up the statute or the rule. We have it here.

MR. SCHNAYER: Well, these are the notes for the -

- committee notes for that, that were part of it, describing what was contemplated under new twenty -- or, 26(f), and what it basically talks about is -- these were recently passed. It talks about electronic discovery, it talks about the requirement to talk about electronic discovery, to exchange information; that the committee now wants these initial conferences to be significant, to exchange information, for the parties to cooperate.

And the first conference we had, one of the parties wasn't even present at that conference. Because they wouldn't agree -- the same attorneys that represent them now wouldn't agree to talk on their behalf. We couldn't have had a conference.

I asked them to provide me with information about electronic discovery. The new rules say this is an important issue that must be addressed, and we had hours of conversations after this. Right up until the time we filed the 26(f) statement. And we -- we -- took the initiative on that.

We asked them to provide us with a bunch of information. If you look at the letters attached to my motion, we sent out letters and we show you a list of questions we asked them, that they never complied with.

So, for example -- we were trying to hone the issues down. This is a complicated case. Understand,

there's a Japanese company and a U.S. company. This is not easy. There might be additional companies involved here. If we don't get the parties that we need involved or find out about the electronic data, it's hard for us to comply with Rule 26(f) as contemplated by the rules. And we had conversation after conversation with them. And they wouldn't provide us with the information. Their answer was, "We're not going to give you free discovery."

Serve formal requests. Well, the rule contemplates the parties are going to cooperate. We hoped to get a 26(1) conference completed pretty quickly, but we couldn't until the very last day because the parties were exchanging extensive drafts, because we weren't getting cooperation. In the end, I finally threw up my hands and said, "Okay, I have to move forward, I have to agree on something," and we submitted a joint report to the Court.

THE MAGISTRATE JUDGE: Do you agree that in the joint report this issue which -- when I say the "joint report," I mean the joint report which you also signed -- does not raise this issue at all?

MR. SCHNAYER: No, it doesn't really address it at all. They filed a separate motion. It doesn't address it. And it does not --

THE MAGISTRATE JUDGE: Do you also acknowledge that you did not file a motion to extend the deadline for

serving your answers to these discovery requests until a more meaningful meet and confer session could take place?

MR. SCHNAYER: Your Honor, I didn't -- the rule is specific. It says you have to have one beforehand.

You know, I feel like I'm getting set up here. You know, they complain my answers aren't sufficient. Your Honor, they gave me nothing in their answers. They gave me nothing. They objected to everything. I provided them with substantive responses. You know, we walk into this case --

THE MAGISTRATE JUDGE: Is there a motion pending regarding your client's concerns about the sufficiency of the responses served by Casio?

MR. SCHNAYER: I haven't had a chance to meet and confer with them. We were preparing for this motion, and we'll deal with it. We have to meet and confer. I was only -- he comes in and he says my responses aren't good. I was responding to that. And I was pointing out to you and I was going to show you, here's a several-page response showing how the claims read on their device.

We gave them substantive responses. They didn't give us substantive responses. They wouldn't provide us with the information we needed for the 26(f) conference. It's my view that it never occurred until the day we finalized, signed off on the agreement, and sent it to the Court, and the answers aren't due until -- they're not even

due today. We served them early. By serving him yesterday; we served him early.

THE MAGISTRATE JUDGE: What is your contention regarding when the answers to discovery requests served on March 2nd, 2007, are due?

MR. SCHNAYER: They won't be due until a couple of days from now. They're not due, because we never had a 26(f) conference.

THE MAGISTRATE JUDGE: What is the basis of your determination that they're not due until two days from today?

MR. SCHNAYER: Because we took the exact date when the parties did have a completed 26(f) conference, after several substantive meetings, and the parties came to a proposal to submit to the Court and we submitted the scheduling proposal. That's the day that we had our 26(f) conference and finalized it. And it's my position that's -- according to the rules, that's the only date that makes sense.

If I'm wrong, I apologize. We did this in good faith. We did not do this to delay anything. This is a complicated case. There's complicated issues. We have been looking into getting documents, we've got a client from Germany, we've got a -- the patentee doesn't work for our company, so it's not such an easy issue, but we have been

gathering documents. And we put together a very substantive charge of infringement here. Your Honor, they don't have anything like this in their discovery responses. So this took time to put together.

But they complain that I delayed everything. It's not true. We tried to get the 26(f) conference done sooner. We couldn't get any responses from them. They didn't give us the information. I'll point out the letters to you, because I think those are important.

If you look at our brief --

THE MAGISTRATE JUDGE: I have it here.

MR. SCHNAYER: And if you look at Exhibit A. This is an interesting one. Exhibit A, in the back two pages, is a letter from opposing counsel. It starts out as a -- the bottom part is an e-mail from J. Gold, who is Plaintiff's counsel, and Mr. Swick, Joseph Swick, who is the top part, this is a response to a e-mail, is on the part -- is the top part.

But if you look at the second page -- and this is the letter that Mr. Gold sent after that supposed conference. It says, "With regard --" on the last page of this. Second to last page, I'm sorry. Second to last page, point 4 of Exhibit A, it says -- Point 4 on there? Second line?

THE MAGISTRATE JUDGE: I have it.

MR. SCHNAYER: Okay. "Regarding your request to identify the specific details of Casio Inc., Casio Japan, and any related entities' computer systems, such a request is beyond the scope of the 26(f) conference." Then he goes on and gives us a little bit of information about it, but he says -- and this is the important part -- bottom line, last line, "If you believe you are entitled to any more information about Casio Inc.'s system or any specific discovery, please serve a discovery request and we'll consider it." That was their attitude. We're not going to give you free discovery. As the rules contemplate, parties should cooperate.

Then if you look at my letter, if you look at Exhibit -- look at Exhibit, if you would, please, Your Honor, E. First page.

THE MAGISTRATE JUDGE: I have it.

MR. SCHNAYER: This discusses a conference that Mr. Swick in my office had with Mr. Gold, and Mr. Gold represents the Plaintiff. And you can see the second paragraph. It says, "At the conference we asked you several questions relevant to developing a carefully considered litigation schedule. At the time, you weren't able to provide any answers to several of our questions. We ask that you please provide us with answers to these questions before our next meeting on April 16th." So these were part

of the continuing meetings.

And you can see we're asking questions about the name of the companies that were involved in the design and development, so we can decide if we have the right parties and know how long discovery is going to take -- reasonable questions. "What are the names of the companies that were involved in the manufacture of the cameras. What are the names --" 3, "What are the names of all Casio companies that were involved in the sale of the cameras." That's also relevant. "Are both Casio Japan and Casio USA willing to voluntarily produce relevant information and witnesses from all their parent companies?" So we're trying to find out how much foreign discovery we have to do. That's a reasonable request.

Five, "Is Casio Japan and Casio US potentially relevant electronic information reasonably accessible?" The rules require you to talk about reasonable accessibility in the 26(f) conference. That is something you must discuss. Or you should discuss. And that is, is the information reasonably accessible because electronic discovery is very complicated and if it's not reasonably accessible, then you have to talk about shifting costs and who should pay for it. And that's important, according to the new rules, to deal with electronic discovery. We asked them questions about that and we got no answers.

And then we asked, "Who are the names of the -- names, titles and employers of those individuals at Casio Japan and Casio US who have special knowledge about each respective party's computer system." If you read the section of the rule, the notes on it, it says that that's the kind of information you're supposed to talk about. In fact, they discuss and some Courts have said you've got to bring somebody knowledgeable about it from the company and have a real significant exchange. So we tried to do that with them.

And now look, if you would, at Exhibit F. Exhibit F is April 18th, a further letter from Mr. Swick to Mr. Gold. "We are disappointed that you called this morning to state you were unilaterally canceling our previously agreed to upon continuation of the Rule 26(f) conference scheduled to occur today. As we understand it, you are unwilling to participate because you have not received _____ proposal. However, at this time you also indicated you were unwilling to discuss many of the Rule 26(f) issues that will help parties develop a carefully developed scheduling plan. Specifically, you told me, for the first time, you're unwilling to discuss the following questions," and those are the same questions that we had listed in our other letter to them. And there's no letter that says, "Yes, we were willing to discuss these with you."

So a lot of the delay here was caused in having the final Rule 26(f) conference by counsel for Plaintiff not giving us, quote, "free discovery," which is the kind of cooperation you need in a case to formulate a reasonable discovery plan.

THE MAGISTRATE JUDGE: Am I correct, Mr. Schnayer, that the sole basis of your client's determination to serve no answers until last night has to do with the manner in which the conference was conducted?

MR. SCHNAYER: The fact that there was no conference. There was no conference. And --

THE MAGISTRATE JUDGE: Very well.

MR. SCHNAYER: There was none. That's not a conference. And it didn't occur until we signed the papers after many discussions, and trying to do it in a quick fashion.

I also have one other point I'd like to make.

THE MAGISTRATE JUDGE: Yes.

MR. SCHNAYER: Counsel has raised an issue, and this is sort of a side point, but I want to make this clear because I think it's important.

He said one of the sanctions we want is that you should segregate out the damages issue and willfulness issue. And I'd like to point out that at the hearing that occurred with the Judge, the scheduling hearing that we had,

the one hearing, the Judge -- that issue was before the Court because both parties addressed it in the papers they filed, this big paper we put together finally which listed the parties' positions. And they asked the Judge for bifurcation. They asked the Judge for bifurcation.

And the Judge, at the end of the hearing, issued an order and that's -- of the record, and she ordered the schedule. And there's nothing in the order that talks about bifurcation. And after she read the order -- she read it out loud, and then she issued it in writing after the hearing, she said, "Are there any more questions?" She turned to Plaintiff first. Counsel didn't raise any questions. He didn't raise this issue with the Judge.

Bifurcation was already considered by the Court -- by the District Court Judge -- and denied. It was denied. And now they're saying, we want the sanction of bifurcation. Well, they have it -- it's already been ruled on. And second, it's not a proper -- there's no authority to say that this is a proper sanction under the rules. There's no authority for it. it's just like, we want it because we want it. It's not proper. So it's already been ruled on.

So, Your Honor, we did believe that the Judge's order -- they have the ability to ask the Judge -- and they never did in the papers they filed -- to address the issue of the Rule 26(f) conference. They never said to the Judge,

"You know, we want a specific ruling that discovery should be considered served as of that day." They never asked for it in their pleading. And the Judge never ruled on it. If you look at the paper they filed, it doesn't ask for that. So they never asked for it, the Judge never ruled on it, and we proceeded with that understanding.

If I'm wrong, I apologize. We served our discovery requests. But it's not sanctionable, Your Honor.

THE MAGISTRATE JUDGE: Very well, thank you, Mr. Schnayer.

MR. SCHNAYER: Thank you, Your Honor.

THE MAGISTRATE JUDGE: Mr. Stimpson, if you wish a brief reply I will hear you.

MR. STIMPSON: Your Honor, I don't (inaudible) have 30 seconds.

THE MAGISTRATE JUDGE: My expectation was that one of you would address the issue -- do you need a moment to confer with Mr. Schnayer? If so, you certainly may do so and I'm happy to take a brief recess if you need more than a moment or two to huddle.

MR. STIMPSON: Not a problem.

MR. SCHNAYER: Your Honor?

THE MAGISTRATE JUDGE: Mr. Schnayer, yes.

MR. SCHNAYER: If I may, please. Thank you. Counsel points out to me, co-counsel, that the committee

notes _____ -- Subsection (f) of the committee notes points out and it talks about Rule 26(f) as amended to direct the parties to discuss discovery electronically stored information during their discovery planning conference. And the rule focuses on the issues relating to disclosure or discovery of electronically stored information. Discussion is not required in cases which involve -- don't involve electronic discovery. In this case, of course, it does.

And it goes on in the committee notes, it says, it talks extensively about how this is important to focus the issues, to focus the issues so that you can have a good proposal to the Judge and focus the discovery in the case.

To have a 15-minute discussion where the parties haven't done anything is not a local rule conference. It's not consistent with these guidelines that are set out in the committee notes. It really contemplates that you -- and it goes through, and if Your Honor would care to read it after the hearing, it goes through and it says you're supposed to discuss these issues and narrow the issues.

THE MAGISTRATE JUDGE: The Court is eminently familiar with the committee notes.

MR. SCHNAYER: Thank you, Your Honor.

THE MAGISTRATE JUDGE: Very well. Thank you. You may have a seat.

MR. SCHNAYER: Appreciate it. Thank you.

MR. STIMPSON: Your Honor, 30 seconds. Just on the last point that Mr. Schnayer raised, about this being already -- bifurcation already being decided by Judge Kessler. And that meet and confer statement, I believe -- I don't have it in front of me, but I believe the very first thing we said was we're asking for this as a sanction, and Judge Kessler said she's passing this motion on to Your Honor. She certainly did not rule on bifurcation.

The rest of Mr. Schnayer's argument was all about 26(f), and I don't believe this is about 26(f). This is about noncompliance with Judge Kessler's order.

If you don't have any further questions, I'll sit down.

THE MAGISTRATE JUDGE: Very well. Thank you. You may have a seat.

MR. STIMPSON: Thank you.

THE MAGISTRATE JUDGE: As the Court indicated at the outset, the Court reviewed the motion, the opposition and the reply in advance of the hearing, and the Court has now considered the proffers and arguments of counsel during the course of the hearing. Having done so, the Court will grant the motion, largely for the reasons offered by the Movant, both orally and in writing.

More specifically, the Court finds that what Papst

urges upon the Court is a novel way of counting the number of days in which a party must serve responses to written discovery requests. The Court uses the term, quote, "novel," close quote, because there is simply no authority which supports this method of calculating the deadline.

The rules make plain when it is that a party is to serve responses to written discovery requests. There was no motion for enlargement of time filed by Papst. Papst did not seek any clarification of the due date in the meet and confer report that counsel, along with opposing counsel, filed in this matter, and appears to have unilaterally taken the position that because Papst was displeased with the manner in which the Rule 26(f) meeting or conference was conducted that the responses to the written discovery requests would be withheld.

However, there is no authority that suggests that a party may unilaterally alter the rule which would otherwise apply, particularly in an instance such as this where the Court ordered that discovery proceed, simply because of a concern regarding the sufficiency of the 26(f) conference.

For these reasons, the Court finds that the opposition to the motion to compel and for sanctions was not substantially justified and that there are no circumstances which would make the imposition of sanctions unjust.

The Court therefore orders the following.

First, the Court orders that complete responses -- that is, without objections, which have been waived by the failure to respond in a timely fashion -- be served within 10 calendar days of today's date.

Second, the Court imposes as a sanction the costs to Casio, including reasonable attorney's fees, of moving to compel and for sanctions. The Court will order that such costs be paid within 30 days of today's date and that counsel work cooperatively to share and comment upon the reasonableness of those costs. This is not a matter that should entail the filing of a motion, because the Court expects that you will work cooperatively to determine what the reasonable costs are.

To the extent that there is an additional sanction that Casio requests, the motion for any additional sanction other than the fees and costs, is denied.

The Clerk will prepare a minute entry which will indicate that the motion to compel and for sanctions was granted for the reasons set forth on the record at the hearing. There is no order, no written order, that will follow. The minute entry will also indicate that complete responses without objection are to be served within ten days of today's date, and that Papst is to pay Casio's costs within 30 calendar days of today's date.

Now, is there anything further in this matter this afternoon? Mr. Stimpson or Mr. Fe?

MR. STIMPSON: Not that's pending before Your Honor right now, nothing (inaudible).

THE MAGISTRATE JUDGE: Very well, thank you. Mr. Schnayer, Mr. Wright?

MR. SCHNAYER: Nothing further, Your Honor. Thank you.

THE MAGISTRATE JUDGE: Very well. Thank you very much.

There is nothing scheduled for the courtroom for the rest of the day, so if you wish to stay and continue your efforts to confer before you return to your respective destinations, you are welcome to do so.

COUNSEL: Thank you.

THE MAGISTRATE JUDGE: Very well. Thank you very much.

(Whereupon, proceedings were concluded.)

UNITED STATES OF AMERICA)
) Civil Action No. 06-1751
DISTRICT OF COLUMBIA)

I, PAUL R. CUTLER, do hereby certify that a recording of the foregoing proceedings in the above matter was duplicated from an original recording by the Office of the Clerk, United States District Court for the District of Columbia, and that said duplicate recording of the proceedings was transcribed under my direction to typewritten form.

PAUL R. CUTLER

I do hereby certify that the foregoing transcript was typed by me and that said transcript is a true record of the recorded proceedings to the best of my ability.

BONNIE FURLONG

EXHIBIT H

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

CASIO INC. Plaintiff, v. PAPST LICENSING GMBH & CO. KG, Defendant.	Civil Action No. 1:06 CV 01751 Judge: Gladys Kessler Magistrate Judge: Robinson
PAPST LICENSING GMBH & CO. KG, Counter-Plaintiff v. CASIO INC. and CASIO COMPUTER CO., LTD. Counter-Defendants	Discovery Motion Hearing on July 23, 2007

MOTION OF PAPST LICENSING GMBH & CO. KG TO CONTINUE MAGISTRATE JUDGE ROBINSON'S JULY 23, 2007 MOTION HEARING

Defendant and Counter-Plaintiff, Papst Licensing GmbH & Co. KG ("Papst"), respectfully moves this Magistrate Judge for an Order continuing her July 23, 2007 motion hearing until a later date because (1) this case will likely be stayed given that Papst has recently filed a motion before the Judicial Panel on Multidistrict Litigation ("MDL Panel") to transfer five related actions, including this case, to a single district for consolidated pre-trial proceedings and has or will file in a timely fashion motions to stay with Judge Kessler and the other District Courts, and (2) it will be more efficient to hear all pending discovery motions at the same time should a stay not be granted.

I. THE JULY 23, 2007 DISCOVERY HEARING SHOULD BE CONTINUED UNTIL PAPST'S MOTION TO STAY THIS CASE IS RULED UPON BY JUDGE KESSLER IN LIGHT OF PAPST'S PENDING MOTION BEFORE THE MDL PANEL TO TRANSFER THIS ACTION

On July 9, 2007, Papst Licensing filed with the MDL Panel a Motion for Transfer of Actions to Single District For Consolidated and Coordinated Pre-trial Proceedings as permitted by 28 U.S.C. § 1407(a). (Ex. A). The motion seeks to transfer five actions, including this case and one other pending before Judge Kessler, to a single district for consolidated pre-trial proceedings. After Papst's filing on July 9, 2007, Papst learned of another lawsuit that was filed before Judge Kessler that will also be the subject of Papst's Motion. The three cases pending before Judge Kessler that are requested to be transferred are as follows:

District of Columbia
Casio Inc. v. Papst Licensing GmbH & Co. KG, Case Action No. 1:06cv1751, Judge Kessler

District of Columbia
Fujifilm Corp., Fujifilm U.S.A., Inc. v. Papst Licensing GmbH & Co. KG, Case Action No. 1:07cv01118, Judge Kessler

District of Columbia
Matsushita Electric Industrial Co., Ltd., Victor Company of Japan, Ltd. v. Papst Licensing; Civil Action No. 07cv01222, Judge Kessler

The three additional related cases that are requested to be transferred are as follows:

Northern District of Illinois
Papst Licensing GmbH & Co. KG v. Fujifilm Corp., Fujifilm U.S.A. Inc., Case No. 07cv3401, Judge Holderman

Central District of California, Western Division
Papst Licensing GmbH & Co. KG v. Samsung Techwin Co., Samsung Opto-Electronics American, Inc.; Civil Action No. 07cv4249, Judge Anderson

District of Delaware
Papst Licensing GmbH & Co., KG v. Olympus Corp., Olympus Imaging America Inc., Civil Action No. 07cv0415, Vacant Judgeship

Each of the six actions concerns whether the respectively accused digital cameras infringe the same two United States patents (the Tasler patents) owned by Papst, and concerns the validity of those two patents. The purpose of seeking consolidation for pre-trial purposes is to minimize duplicative litigation and inconsistent rulings. Concurrent with this motion, Papst will be filing a Motion to Stay this action and for an immediate status hearing before Judge Kessler so that she can be given the opportunity to consider how to handle the likely transfer to an MDL action, or how otherwise to efficiently handle the three related cases now pending before her. (Copy attached as Exhibit B). A stay of this action by Judge Kessler is likely given that one other Court has already ruled that a related case should be stayed until such time as the MDL panel renders its decision on the transfer. *See, Papst Licensing GmbH & Co. KG v. Fujifilm Corp., Fujifilm U.S.A. Inc., Case No. 07cv3401, Judge Holderman,* [Docket # 15] (staying discovery and motion to dismiss until at least October 2, 2007). Papst has or will file in a timely fashion similar motions for stay in all six cases.

Staying this case, continuing the current discovery motion hearing, and permitting the transfer of this action to a single MDL action will be the most efficient course given the common issues of fact in each of the six actions such as (1) whether the Tasler patents are valid; and (2) whether digital cameras made, used, sold or offered for sale by Casio, Inc., Casio Computer Co., Ltd., Fujifilm Corp., Fujifilm U.S.A., Inc., Olympus Corp., Olympus Imaging America, Inc., Samsung Techwin Co., Samsung Opto-Electronics America Inc., Matsushita Electric Industrial Co., Ltd., and Victor Company of Japan, Ltd. infringe or do not infringe the Tasler patents. Consolidation of these actions for pretrial discovery proceedings will serve the convenience of the parties and witnesses, and promote the just and efficient conduct and management of the actions. Needless duplication or conflicting adjudication, or both, could result from the

continued independent maintenance of the separate actions. Therefore, Magistrate Judge Robinson should continue her July 23 discovery hearing until such time as Judge Kessler has the opportunity to decide whether to stay this action, or how to otherwise coordinate the three related actions on the same patents now pending before her.

II. IN THE UNLIKELY EVENT THAT JUDGE KESSLER DOES NOT STAY THIS CASE, IT WILL STILL BE MORE EFFICIENT TO HEAR ALL PENDING DISCOVERY MOTIONS AT A LATER TIME

Magistrate Judge Robinson previously scheduled oral argument for two Casio motions, Casio's Motion for Sanctions [Docket # 47] and Casio's Motion to Strike Papst's Discovery Requests [Docket # 48]. On July 5, 2007, the parties jointly requested and were granted a request to reset that hearing to July 23, 2007 to accommodate the various schedules of out-of-town trial counsel. Although Papst is still prepared to address Casio's Motions on July 23, 2007 if necessary, Papst respectfully suggests that it would be most efficient for the Court and all out-of-town trial counsel to reset the hearing for a later date so that the briefing of the ***four other*** pending discovery motions can be completed, and then heard all at the same time.

Accordingly, Papst respectfully requests that, should Judge Kessler choose not to stay this case, that the current July 23, 2007 hearing be reset to August 16th, 17th or someday during the week of August 20, 2007. August 16th is the first date that counsel for Papst will be available for a reset hearing. A list of each of the pending discovery motions with their current briefing status is as follows:

1. Casio's Motion for Sanctions under Fed.R.Civ.P. 37 [Docket # 47] (Briefing is complete.)

2. Casio's Motion to Strike Papst's Discovery Requests [Docket #48] (Briefing is complete.)

3. Papst's Motion for Entry of a Protective Order [Docket # 49] (Briefing will be complete on July 16, 2007)

4. Papst's Motion to Compel the Production of Documents [Docket # 52] (Briefing will be complete on July 16, 2007)

5. Casio's Motion to Bifurcate Damages and Willfulness Issues [Docket # 54] (Briefing will be complete on July 16, 2007)

6. Papst's Motion to Compel Interrogatory Answers [Docket # 63] (Briefing will be complete on July 30, 2007)

Papst respectfully suggests that it will be most efficient for the Court to hear oral argument on all of the motions at the same time because nearly all of the discovery motions are interrelated. For example, Casio's Motion to Strike [Docket # 48] argues that Papst's document requests and interrogatories should be stricken because they supposedly seek irrelevant information, while Papst's Motions to Compel Documents [Docket # 52] and Interrogatories [Docket #63] argue that Casio should produce its documents and information because they are relevant. Similarly, Papst's Motion to Compel Documents [Docket # 52] seeks the immediate production of Casio documents on willfulness and damages issues, while Casio's Motion for Bifurcation [Docket # 54] seeks to delay the production of Casio documents on willfulness and damages issues. Papst's Motion to Compel Documents [Docket # 52] seeks the immediate production Casio's confidential technical information to Papst's trial counsel, Welsh & Katz, Ltd., while Casio's Opposition to Papst's Motion for Entry of a Protective Order argues that Welsh & Katz, Ltd. should never be allowed to review Casio's confidential technical information. [Docket # 58].

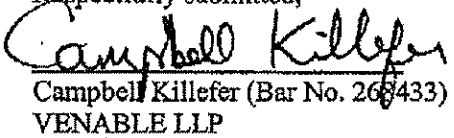
In accordance with Local Rule 7(m), on July 13, 2007, Papst's counsel met and conferred on this motion with Casio's counsel, who stated that they would oppose this Motion.

Papst respectfully requests that this Court (1) enter an order continuing the hearing of any discovery motion until such time as Judge Kessler rules upon Papst's Motion to Stay or

otherwise is given the opportunity to consider how to handle her three related actions or (2) enter an order resetting the current discovery hearing on July 23rd to either August 16th, August 17th or someday during the week of August 20, 2007.

Date: July 13, 2007

Respectfully submitted,



Campbell Killefer (Bar No. 268433)
VENABLE LLP
575 7th Street, N.W.
Washington, D.C. 20004
(202) 344-4000

Jerold B. Schnayer
Joseph E. Cwik
WELSH & KATZ, LTD.
120 South Riverside Plaza,
22nd Floor
Chicago, IL 60606
(312) 655-1500

Attorneys for Papst Licensing GmbH & Co. KG

CERTIFICATE OF SERVICE

I hereby certify that the foregoing was served upon the following counsel for Plaintiff and Counterclaim Defendant Casio Inc. and Counterclaim Defendant Casio Computer Co., Ltd. through the Court's ECF electronic service and by regular U.S. mail, postage prepaid, this 13th day of July, 2007:

J. Kevin Fee
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, NW
Washington, D.C. 20004

Jeffrey M. Gold
Laura Krawczyk
MORGAN LEWIS & BROCKIUS LLP
101 Park Avenue
New York, New York 10178

Scott D. Stimpson
The Law Office of Scott Stimpson
Suite 1102
445 Hamilton Avenue
White Plains, NY 10601
Counsel for Casio Inc. and Casio Computer Co., Ltd.

Campbell Killefer

EXHIBIT I

FILED
6-15-07
JUN 15 2007
MICHAEL W. DOBBINS

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

PAPST LICENSING GmbH & Co. KG
Plaintiff,

v.

FUJIFILM Corporation, FUJIFILM U.S.A., Inc.
Defendants

07cv3401
JUDGE HOLDERMAN
MAG. JUDGE ASHMAN

DEMAND FOR JURY TRIAL

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Papst Licensing GmbH & Co. KG ("Papst Licensing"), by and through counsel, for its Complaint against defendants FUJIFILM Corporation ("FUJIFILM"), and FUJIFILM U.S.A., Inc. ("FUJIFILM USA") (collectively "the FUJIFILM Defendants"), states as follows:

JURISDICTION AND VENUE

1. This Court has federal question jurisdiction of Papst Licensing's patent infringement claims pursuant to 28 U.S.C. §1331 and 1338(a) because this action arises under the patent laws of the United States. 35 U.S.C. §§ 1, *et seq.*

2. Venue is proper in the Northern District of Illinois, Eastern Division pursuant to 28 U.S.C. §§ 1391(c), 1391(d) and 1400(b).

3. Papst Licensing is a company existing under the laws of The Federal Republic of Germany with its principal place of business headquartered at Bahnofstrasse 33, 78112 St. Georgen, Germany.

4. Upon information and belief, FUJIFILM is a multinational corporation having an established and on-going business throughout the United States, and particularly, transacts

EXHIBIT B

business in this district through a sales office of FUJIFILM USA which is located at 850 Central Avenue, Hanover Park, Illinois 60133.

5. Upon information and belief, FUJIFILM USA is a wholly-owned subsidiary of FUJIFILM.

FACTS GIVING RISE TO THIS ACTION

6. The patents listed in Paragraphs Nos. 7 and 8 below cover, *inter alia*, various aspects of digital cameras. Unless otherwise specified, the said patents are collectively referred to hereinafter as the "Patents in Suit." Papst Licensing is the lawful owner, by assignment, of the entire right, title, and interest in and to each and every one of the Patents in Suit.

7. United States Patent No. 6,470,399 B1 duly and legally issued on October 22, 2002.

8. United States Patent No. 6,895,449 B2 duly and legally issued on May 17, 2005.

9. A reasonable opportunity for further investigation or discovery is likely to provide evidentiary support the FUJIFILM Defendants have made, used, sold or offered to sell to numerous customers in the United States or have imported into the United States digital cameras which infringe the Patents in Suit.

10. A reasonable opportunity for further investigation or discovery is likely to provide evidentiary support that the FUJIFILM Defendants have actively induced others and/or contributed to the infringement of the Patents in Suit.

11. A reasonable opportunity for further investigation or discovery is likely to provide evidentiary support that the FUJIFILM Defendants committed said infringements willfully.

12. Papst Licensing has given written notice of infringement to the FUJIFILM Defendants.

13. Upon information and belief, the FUJIFILM Defendants have been and still are committing the said infringements and will continue to do so unless enjoined by this Court.

WHEREFORE, Plaintiff demands a permanent injunction against continued infringement, damages adequate to compensate for said infringements, together with all applicable interest and costs, an increase of damages to three times the amount found or assessed, attorney fees, and such other and further relief as the Court may deem just and proper and as is warranted by the evidence.

DEMAND FOR JURY TRIAL

Plaintiff demands a trial by jury on all issues triable by jury as of right.

June 15, 2007

Respectfully submitted,

Jerold B. Schnayer (ARDC No. 2495538)
John L. Ambrogi (ARDC No. 06203626)
WELSH & KATZ, LTD.
120 South Riverside Plaza, 22nd Floor
Chicago, Illinois 60606
Telephone: (312) 655-1500

Attorneys for Papst Licensing

EXHIBIT J

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

FUJIFILM CORPORATION,
Midtown West, 7-3, Akasaka 9-chome
Minato-ku, Tokyo 107-0052
Japan,

FUJIFILM U.S.A., INC.
200 Summit Lake Drive, Floor 2
Valhalla, NY 10595,

Plaintiffs,

v.

PAPST LICENSING GmbH & Co., KG
Bahnhofstrasse 33
78112 St. Georgen, Germany,

Defendant.

C

Case: 1:07-cv-01118
Assigned To : Kessler, Gladys
Assign. Date : 6/21/2007
Description: General Civil

COMPLAINT FOR DECLARATORY JUDGMENT OF NON-INFRINGEMENT AND INVALIDITY OF PATENTS

Plaintiffs Fujifilm Corporation ("Fujifilm Japan") and Fujifilm U.S.A., Inc. ("Fujifilm U.S.A.") (collectively, "Fujifilm") bring this action against Papst Licensing GmbH & Co, KG ("Papst Licensing") for a declaration of non-infringement by Fujifilm digital camera products and invalidity with respect to two patents purportedly owned by Papst Licensing.

Parties

1. Plaintiff Fujifilm U.S.A. is a New York corporation with its principal place of business at 200 Summit Lake Drive, Floor 2, Valhalla, New York 10595.

2. Plaintiff Fujifilm Japan is a Japanese corporation with its principal place of business at Midtown West, 7-3, Akasaka 9-chome, Minato-ku, Tokyo 107-0052, Japan.

3. Fujifilm U.S.A. and Fujifilm Japan are in the business of manufacturing and selling a wide range of consumer electronics products, including digital cameras.

4. Upon information and belief, Papst Licensing is a company existing under the laws of The Federal Republic of Germany with its principal place of business at Bahnhofstrasse 33, 78112 St. Georgen, Germany.

5. Upon information and belief, Papst Licensing does not manufacture or sell any consumer products. Its sole business is to acquire and enforce intellectual property rights.

Patents in Suit

6. Papst Licensing has held itself out as the owner of United States Patent No. 6,470,399 B1 ("the '399 patent") entitled "Flexible Interface for Communication Between a Host and an Analog I/O Device Connected to the Interface Regardless of the Type of the I/O Device," which issued on October 22, 2002.

7. Papst Licensing has also held itself out as the owner of United States Patent No. 6,895,449 B2 ("the '449 patent") entitled "Flexible Interface for Communication Between a Host and an Analog I/O Device Connected to the Interface Regardless the Type of the I/O Device," which issued on May 17, 2005.

8. Papst Licensing has been active in prosecuting continuations and divisional applications of the patents in suit, including pending application No. 11/078,778.

9. Papst Licensing has represented that Fujifilm, along with dozens of other companies, must either license the patents in suit or be faced with costly litigation and massive injury to business and reputation. Papst Licensing has made these threats without conducting an appropriate analysis of the Fujifilm digital camera products it accuses of infringement and with knowledge that those products clearly and objectively do not infringe the patents in suit.

10. Papst Licensing has specifically accused Fujifilm products of infringing the '399 patent and the '449 patent. For example, in a letter dated March 31, 2006 Papst Licensing accused the Fujifilm FinePix E550 and other unnamed digital cameras of infringing both of the patents-in-suit. Papst Licensing has repeated its accusations of infringement on numerous occasions since that time.

11. Fujifilm has presented Papst Licensing with a detailed analysis of why Fujifilm products do not infringe the '399 patent or the '449 patent. Fujifilm has explained why its products do not infringe the patents-in-suit to Papst Licensing on multiple occasions, including in meetings in July and November 2006, and by letter in September 2006.

12. Notwithstanding the clear evidence that Fujifilm products to do infringe the patents-in-suit, Papst Licensing has continued to demand that Fujifilm pay Papst Licensing royalties for use of the '399 and '449 patents.

13. Fujifilm has refused to take a license to these patents on the ground that no such license is needed because Fujifilm's digital camera products clearly and objectively do not infringe the '399 and '449 patents.

Jurisdiction and Venue

14. This action arises under the Declaratory Judgment Act and the patent laws of the United States. See 28 U.S.C. §§ 2201 and 2202; Title 35 U.S.C. §§ 100 *et seq.*

15. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338.

16. This Court has personal jurisdiction over Papst Licensing pursuant to 35 U.S.C. § 293.

17. Venue in this judicial district is proper under at least 28 U.S.C. § 1391(c) and (d) and 35 U.S.C. § 293.

18. The patents in suit are already being litigated in this forum. Specifically, Casio, Inc. filed an action against Papst Licensing seeking a declaratory judgment that the '399 and '449 patents are not infringed by Casio products and are invalid. That action is styled *Casio v. Papst Licensing*, Case No. 1:06-cv-01751-GK.

19. An actual and justiciable controversy exists between Fujifilm, on the one hand, and Papst Licensing on the other, as to the infringement and validity of the patents in suit.

Count I

(Declaratory Judgment of non-infringement and invalidity of the '399 patent)

20. Fujifilm re-alleges and incorporates by reference its allegations in paragraphs 1 through 19 above as if fully set forth herein.

21. Fujifilm has not directly infringed, contributed to infringement of, or induced infringement of any valid claim of the '399 patent, nor is Fujifilm, either literally or under the doctrine of equivalents, directly infringing, contributing to direct infringement of, or inducing infringement of any valid claim of the '399 patent.

22. The '399 patent is invalid for failing to comply with one or more of the requirements for patentability set forth in Title 35 U.S.C. § 101, *et seq.*, including but not limited to 35 U.S.C. §§ 101, 102, 103 and/or 112.

23. An actual and justiciable controversy exists between Fujifilm and Papst Licensing regarding the alleged infringement and validity of the '399 patent by virtue of the allegations made by Papst Licensing that Fujifilm and/or its customers are or have been infringing the '399 patent.

24. This case is an exceptional case pursuant to 35 U.S.C. § 285 entitling Fujifilm to an award of its attorneys' fees.

Count II

(Declaratory Judgment of non-infringement and invalidity of the '449 patent)

25. Fujifilm re-alleges and incorporates by reference its allegations in paragraphs 1 through 24 above as if fully set forth herein.

26. Fujifilm has not directly infringed, contributed to infringement of, or induced infringement of any valid claim of the '449 patent, nor is Fujifilm, either literally or under the doctrine of equivalents, directly infringing, contributing to direct infringement of, or inducing infringement of any valid claim of the '449 patent.

27. The '449 patent is invalid for failing to comply with one or more of the requirements for patentability set forth in Title 35 U.S.C. § 101, *et seq.*, including but not limited to 35 U.S.C. §§ 101, 102, 103 and/or 112.

28. An actual and justiciable controversy exists between Fujifilm and Papst Licensing regarding the alleged infringement and validity of the '449 patent by virtue of the allegations made by Papst Licensing that Fujifilm and/or its customers are or have been infringing the '399 patent.

29. This case is an exceptional case pursuant to 35 U.S.C. § 285 entitling Fujifilm to an award of its attorneys' fees.

30. Fujifilm expressly reserves the right to amend this Complaint to add declaratory judgment counts with respect to any continuation or divisional applications relating to the patents in suit that may issue after the date this complaint is filed.

Prayer for relief

WHEREFORE, plaintiffs Fujifilm U.S.A. and Fujifilm Japan pray this Court for the following relief:

1. A declaration that Fujifilm has not infringed, and is not infringing, the '399 or '449 patents;

2. A declaration that Fujifilm has not infringed, and is not infringing, any of the claims of any continuation or divisional application relating to the patents in suit that may hereafter issue;

3. A declaration that each of the claims of the '399 and '449 patents are invalid;

4. An injunction prohibiting Papst Licensing from alleging infringement of the '399 and '449 patents by Fujifilm;

5. An award of damages that Fujifilm has sustained;

6. A declaration that this case is exceptional under 35 U.S.C. § 285, and that plaintiffs be awarded their reasonable attorney fees and costs incurred in connection with this action; and

7. Such other further relief as the Court deems just and proper.

Jury Demand

Plaintiffs Fujifilm U.S.A. and Fujifilm Japan demand a jury trial on all issues so triable.

Dated: June 21, 2007

HOGAN & HARTSON LLP

Steven J. Routh (#376068)
Sten A. Jensen (#443300)
555 Thirteenth Street, NW
Washington, DC 20004
Telephone: (202) 637-6465
Telecopier: (202) 637-5910
E-Mail: sjrouth@hhlaw.com
sajensen@hhlaw.com

Of counsel:

William H. Wright
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067
Telephone: (310) 785-4670
Telecopier: (310) 785-4601
E-Mail: whwright@hhlaw.com

John R. Inge (#413383)
Shinjuku Center Building
46th Floor
25-1 Nishi-Shinjuku 1-Chome
Shinjuku-ku Tokyo, 163-0646
Japan
E-Mail: jringe@hhlaw.com

ATTORNEYS FOR PLAINTIFFS
FUJIFILM CORPORATION AND
FUJIFILM U.S.A., INC.

EXHIBIT K

10/219,105	FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE	07-12-2007::08:23:12

Bibliographic Data

Application Number:	10/219,105	Customer Number:	-
Filing or 371 (c) Date:	08-15-2002	Status:	Patented Case
Application Type:	Utility	Status Date:	04-27-2005
Examiner Name:	KIM, HAROLD J	Location:	FILE REPOSITORY (FRANCONIA)
Group Art Unit:	2182	Location Date:	07-09-2007
Confirmation Number:	6042	Earliest Publication No:	US 2002-0199037 A1
Attorney Docket Number:	9576/96908	Earliest Publication Date:	12-26-2002
Class / Subclass:	710/016	Patent Number:	6,895,449
First Named Inventor:	Michael Tasler , Wuerzburg, (DE)	Issue Date of Patent:	05-17-2005

Title of Invention:	FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE

Close Window

10/219,105	FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE	07-12-2007::08:20:11

Transaction History

Date	Transaction Description
08-14-2006	Correspondence Address Change
08-15-2006	Change in Power of Attorney (May Include Associate POA)
05-17-2005	Recordation of Patent Grant Mailed
04-27-2005	Issue Notification Mailed
05-17-2005	Patent Issue Date Used in PTA Calculation
04-15-2005	Receipt into Pubs
04-15-2005	Dispatch to FDC
04-15-2005	Application Is Considered Ready for Issue
08-17-2004	Issue Fee Payment Verified
04-13-2005	Correspondence Address Change
04-07-2005	Receipt into Pubs
10-18-2004	Correspondence Address Change
10-19-2004	Change in Power of Attorney (May Include Associate POA)
08-17-2004	Issue Fee Payment Received
07-14-2004	Receipt into Pubs
06-07-2004	Receipt into Pubs
06-07-2004	Workflow - File Sent to Contractor
06-04-2004	Receipt into Pubs
06-03-2004	Dispatch to Publications
05-20-2004	Mail Notice of Allowance
05-19-2004	Notice of Allowance Data Verification Completed
05-19-2004	Case Docketed to Examiner in GAU
12-08-2003	Case Docketed to Examiner in GAU
08-15-2002	Preliminary Amendment
12-08-2003	Case Docketed to Examiner in GAU
11-05-2003	Transfer Inquiry to GAU
08-24-2003	Transfer Inquiry to GAU
12-11-2002	Transfer Inquiry to GAU
09-24-2002	Transfer Inquiry to GAU
09-23-2002	Application Dispatched from OIPE
09-19-2002	Application Is Now Complete
08-27-2002	IFW Scan & PACR Auto Security Review
08-15-2002	Initial Exam Team nn

Close Window

10/219,105	FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE	07-12-2007::08:22:17

Attorney/Agent Correspondence Information

Correspondence Address

Name:	Jeffrey W Salmon Esq
Address:	Welsh & Katz Ltd 120 S Riverside Plaza 22nd Floor Chicago IL 60606

Attorney/Agent Information

No Attorney/Agent Data Found.

Close Window

09/331,002	FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNTECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE	07-12-2007::08:23:55

Bibliographic Data

Application Number:	09/331,002	Customer Number:	-
Filing or 371 (c) Date:	06-14-1999	Status:	Patented Case
Application Type:	Utility	Status Date:	10-03-2002
Examiner Name:	DU, THUAN N	Location:	FILE REPOSITORY (FRANCONIA)
Group Art Unit:	2185	Location Date:	07-09-2007
Confirmation Number:	1117	Earliest Publication No:	-
Attorney Docket Number:	9576/96909	Earliest Publication Date:	-
Class / Subclass:	710/001	Patent Number:	6,470,399
First Named Inventor:	MICHAEL TASLER , WURZBURG, (DE)	Issue Date of Patent:	10-22-2002

Title of Invention:	FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNTECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE

Close Window

09/331,002	FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNTECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE	07-12-2007::08:21:18

Transaction History

Date	Transaction Description
08-15-2006	Correspondence Address Change
08-16-2006	Change in Power of Attorney (May Include Associate POA)
03-17-2003	Correspondence Address Change
03-17-2003	Change in Power of Attorney (May Include Associate POA)
03-10-2003	Correspondence Address Change
03-10-2003	Change in Power of Attorney (May Include Associate POA)
10-22-2002	Recordation of Patent Grant Mailed
10-03-2002	Issue Notification Mailed
10-22-2002	Patent Issue Date Used in PTA Calculation
10-22-2002	Patent Issue Date Used in PTA Calculation
10-15-2002	Patent Issue Date Used in PTA Calculation
09-16-2002	Receipt into Pubs
08-16-2002	Issue Fee Payment Verified
04-03-2002	Workflow - Drawings Finished
04-03-2002	Workflow - Drawings Matched with File at Contractor
09-11-2002	Receipt into Pubs
08-19-2002	Application Is Considered Ready for Issue
08-16-2002	Issue Fee Payment Received
06-26-2002	Receipt into Pubs
05-23-2002	Workflow - File Sent to Contractor
05-23-2002	Receipt into Pubs
05-23-2002	Receipt into Pubs
05-22-2002	Dispatch to Publications
05-17-2002	Mail Notice of Allowance
05-17-2002	Notice of Allowance Data Verification Completed
04-08-2002	Date Forwarded to Examiner
04-03-2002	Response after Non-Final Action
04-01-2002	Case Docketed to Examiner in GAU
12-18-2001	Mail Non-Final Rejection
12-14-2001	Non-Final Rejection
06-14-1999	Information Disclosure Statement (IDS) Filed
06-14-1999	Information Disclosure Statement (IDS) Filed
11-07-2001	Case Docketed to Examiner in GAU
10-09-2001	Information Disclosure Statement (IDS) Filed
10-09-2001	Information Disclosure Statement (IDS) Filed
01-28-2001	Correspondence Address Change
10-06-2000	Case Docketed to Examiner in GAU
06-14-1999	Initial Exam Team nn
12-13-1999	Case Docketed to Examiner in GAU
06-14-1999	Preliminary Amendment
08-20-1999	Application Dispatched from OIPE

08-17-1999	IFW Scan & PACR Auto Security Review
07-26-1999	Released to OIPE
07-26-1999	Notice of DO/EO Acceptance Mailed
07-08-1999	371 Application Preexamination Docketing
07-08-1999	371 Application Preexamination Docketing
07-07-1999	IB Paper Match
06-29-1999	371 Application Preexamination Docketing
06-14-1999	Receipt of 371 Request

Close Window

09/331,002	FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNTECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE	07-12-2007::08:21:55

Attorney/Agent Correspondence Information

Correspondence Address

Name:	Jeffrey W Salmon Esq
Address:	Welsh & Katz Ltd 120 S Riverside Plaza 22nd Floor Chicago IL 60606

Attorney/Agent Information

No Attorney/Agent Data Found.

Close Window

EXHIBIT L

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.,
1006, Oaza-Kadoma, Kadoma City,
Osaka, Japan, and

VICTOR COMPANY OF JAPAN, LTD.,
3-12, Moriya-cho, Kanagawa-ku, Yokohama,
Kanagawa, Japan,

Plaintiffs,

v.

PAPST LICENSING GmbH & CO., KG,
Bahnhofstrasse 33
78112 St. Georgen, Germany,

Defendant.

Civil Action No. _____

COMPLAINT FOR DECLARATORY JUDGMENT OF NON-INFRINGEMENT AND INVALIDITY OF PATENTS AND JURY DEMAND

Plaintiffs Matsushita Electric Industrial Co., Ltd. ("MEI") and Victor Company of Japan, Ltd. ("JVC"), bring this action against Papst Licensing GmbH & Co, KG ("Papst Licensing") for a declaration that MEI's and JVC's products do not infringe two patents purportedly owned by Papst Licensing, and a declaration that those two patents are invalid.

Parties

1. Plaintiff Matsushita Electric Industrial Co., Ltd. is a Japanese corporation with its principal place of business at 1006, Oaza-Kadoma, Kadoma City, Osaka, Japan.

2. Plaintiff Victor Company of Japan, Limited is a Japanese corporation with its principal place of business at 3-12, Moriya-cho, Kanagawa-ku, Yokohama, Kanagawa, Japan.

3. MEI manufactures and sells a wide range of consumer electronics products, including digital cameras sold under the Panasonic label.

4. JVC manufactures and sells a wide range of consumer electronics products, including digital camcorders.

5. Upon information and belief, Papst Licensing is a company existing under the laws of The Federal Republic of Germany with its principal place of business at Bahnhofstrasse 33, 78112 St. Georgen, Germany.

6. Upon information and belief, Papst Licensing does not manufacture or sell any consumer products. Its sole business is to acquire and attempt to license or enforce intellectual property rights.

Patents-in-Suit

7. Papst Licensing has held itself out to be the owner of United States Patent No. 6,470,399 B1 ("the '399 patent"), entitled "Flexible Interface for Communication Between a Host and an Analog I/O Device Connected to the Interface Regardless of the Type of the I/O Device," which issued on October 22, 2002.

8. Papst Licensing has also held itself out to be the owner of United States Patent No. 6,895,449 B2 ("the '449 patent"), entitled "Flexible Interface for Communication Between a Host and an Analog I/O Device Connected to the Interface Regardless the Type of the I/O Device," which issued on May 17, 2005.

9. Papst Licensing has prosecuted continuations and divisional applications of the '399 and the '449 patents, including pending application No. 11/078,778.

10. Papst Licensing has told MEI, along with dozens of other companies, that if MEI does not license the '399 and the '449 patents, Papst Licensing will sue MEI for infringing those

patents and subject MEI to costly patent litigation that will cause significant injury to MEI's business and reputation. Papst Licensing has made these threats without conducting an appropriate analysis of MEI's digital camera or other products it accuses of infringement and with knowledge that those products do not infringe the '399 and the '449 patents.

11. Papst Licensing has specifically accused MEI products of infringing the '399 patent and the '449 patent on several occasions. For example, in a letter dated November 27, 2006, Papst Licensing accused several models of Panasonic digital cameras of infringing both patents. Papst Licensing has repeated its accusations of infringement and threats of litigation during 2006 and 2007, including during meetings with MEI's representatives.

12. MEI has explained to Papst Licensing in detail on several different occasions why MEI's products do not infringe the '399 patent or the '449 patent, including, without limitation, during meetings in 2006 and 2007.

13. Notwithstanding the evidence that MEI's products do not infringe the '399 patent or '449 patent, Papst Licensing has continued to demand that MEI pay Papst Licensing royalties for use of the '399 and '449 patents.

14. MEI has refused to take a license to these patents on the ground that no such license is needed, because MEI's digital camera and other products do not infringe the '399 and '449 patents.

15. Papst Licensing has also specifically accused JVC products of infringing the '399 patent and the '449 patent on several occasions. For example, in a letter dated December 21, 2006, Papst Licensing accused a JVC digital camcorder of infringing both patents. Papst Licensing has repeated its accusations of infringement and threats of litigation during 2007, including during a meeting with JVC's representatives. Pabst Licensing has made these threats

and accusations without conducting an appropriate analysis of JVC's digital camcorders or other products it accuses of infringement.

16. Papst Licensing has continued to demand that JVC pay Papst Licensing royalties for use of the '399 and '449 patents.

17. JVC has refused to take a license to these patents on the ground that no such license is needed, because JVC's digital camcorders and other products do not infringe the '399 and '449 patents.

Jurisdiction and Venue

18. This action arises under the Declaratory Judgment Act and the patent laws of the United States. See 28 U.S.C. §§ 2201 and 2202; Title 35 U.S.C. §§ 100 *et seq*.

19. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338.

20. This Court has personal jurisdiction over Papst Licensing pursuant to 35 U.S.C. § 293.

21. Venue in this judicial district is proper under at least 28 U.S.C. § 1391(c) and (d) and 35 U.S.C. § 293.

22. The '399 and the '449 patents are already being litigated in this District in two other matters. Specifically, Casio, Inc. filed an action against Papst Licensing seeking a declaratory judgment that the '399 and '449 patents are not infringed by Casio products and are invalid. That action is entitled *Casio v. Papst Licensing*, Case No. 1:06-cv-01751-GK. Fujifilm Corporation and Fujifilm U.S.A., Inc. also filed an action in this District seeking a declaratory judgment that the '399 and '449 patents are not infringed by Fujifilm products and are invalid. That action is entitled *Fujifilm Corp. and Fujifilm U.S.A., Inc. v. Papst Licensing GmbH & Co., KG*, Case No. 1:07-cv-01118-GK.

23. An actual and justiciable controversy exists between MEI and JVC, on the one hand, and Papst Licensing, on the other hand, concerning Papst Licensing's claims of infringement of the '399 and the '449 patents and concerning whether those patents are valid.

Count I
(Declaratory Judgment of non-infringement and invalidity of the '399 patent)

24. MEI and JVC reallege and incorporate by reference their allegations in paragraphs 1 through 23 above as if fully set forth herein.

25. MEI has not directly infringed, contributed to infringement of, or induced infringement of any valid claim of the '399 patent, nor is MEI, either literally or under the doctrine of equivalents, directly infringing, contributing to direct infringement of, or inducing infringement of any valid claim of the '399 patent.

26. JVC has not directly infringed, contributed to infringement of, or induced infringement of any valid claim of the '399 patent, nor is JVC, either literally or under the doctrine of equivalents, directly infringing, contributing to direct infringement of, or inducing infringement of any valid claim of the '399 patent.

27. The '399 patent is invalid for failing to comply with one or more of the requirements for patentability set forth in Title 35 U.S.C. § 101, *et seq.*, including, without limitation, 35 U.S.C. §§ 101, 102, 103 and/or 112.

28. An actual and justiciable controversy exists between MEI and JVC, on the one hand, and Papst Licensing, on the other hand, regarding the alleged infringement and validity of the '399 patent by virtue of the allegations made by Papst Licensing that MEI and JVC and/or their customers are or have been infringing the '399 patent.

29. This case is an exceptional case pursuant to 35 U.S.C. § 285, entitling MEI and JVC to an award of their attorneys' fees.

Count II

(Declaratory Judgment of non-infringement and invalidity of the '449 patent)

30. MEI and JVC reallege and incorporate by reference their allegations in paragraphs 1 through 29 above as if fully set forth herein.

31. MEI has not directly infringed, contributed to infringement of, or induced infringement of any valid claim of the '449 patent, nor is MEI, either literally or under the doctrine of equivalents, directly infringing, contributing to direct infringement of, or inducing infringement of any valid claim of the '449 patent.

32. JVC has not directly infringed, contributed to infringement of, or induced infringement of any valid claim of the '449 patent, nor is JVC, either literally or under the doctrine of equivalents, directly infringing, contributing to direct infringement of, or inducing infringement of any valid claim of the '449 patent.

33. The '449 patent is invalid for failing to comply with one or more of the requirements for patentability set forth in Title 35 U.S.C. § 101, *et seq.*, including, without limitation, 35 U.S.C. §§ 101, 102, 103 and/or 112.

34. An actual and justiciable controversy exists between MEI and JVC, on the one hand, and Papst Licensing, on the other, regarding the alleged infringement and validity of the '449 patent by virtue of the allegations made by Papst Licensing that MEI and JVC and/or their customers are or have been infringing the '399 patent.

35. This case is an exceptional case pursuant to 35 U.S.C. § 285, entitling MEI and JVC to an award of their attorneys' fees.

36. MEI expressly reserves the right to amend this Complaint to add declaratory judgment counts with respect to any continuation or divisional applications relating to the patents-in-suit that may issue after the date this complaint is filed.

Prayer for relief

WHEREFORE, MEI prays this Court for the following relief:

1. A declaration that MEI has not infringed, and is not infringing, the '399 or '449 patents;

2. A declaration that JVC has not infringed, and is not infringing, the '399 or '449 patents;

3. A declaration that MEI has not infringed, and is not infringing, any of the claims of any continuation or divisional application relating to the patents-in-suit that may hereafter issue;

4. A declaration that JVC has not infringed, and is not infringing, any of the claims of any continuation or divisional application relating to the patents-in-suit that may hereafter issue;

5. A declaration that each of the claims of the '399 and '449 patents is invalid;

6. An injunction prohibiting Papst Licensing from alleging infringement of the '399 and '449 patents by MEI and its customers;

7. An injunction prohibiting Papst Licensing from alleging infringement of the '399 and '449 patents by JVC and its customers;

8. An award of damages that MEI and JVC have sustained;

9. A declaration that this case is exceptional under 35 U.S.C. § 285, and MEI and JVC should be awarded their reasonable attorney fees and costs incurred in connection with this action; and

10. Such other further relief as the Court deems just and proper.

Jury Demand

Plaintiffs MEI and JVC demand a jury trial on all issues so triable.

Dated: July 6, 2007

HOGAN & HARTSON LLP

/s/ Adam K. Levin
Adam K. Levin (D.C. Bar No. 460362)
555 Thirteenth Street, NW
Washington, DC 20004
Telephone: (202) 637-6846
Telecopier: (202) 637-5910
E-Mail: aklevin@hhlaw.com

Of counsel:

Richard de Bodo (Ca. Bar No. 128199)
Rachel M. Capoccia (Ca. Bar No. 187160)
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067
Telephone: (310) 785-4694
Telecopier: (310) 785-4601
E-Mail: rdebodo@hhlaw.com
rmcapoccia@hhlaw.com

ATTORNEYS FOR PLAINTIFFS
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. AND VICTOR COMPANY OF JAPAN, LTD.

EXHIBIT M

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PAPST LICENSING GMBH & CO. KG,

Plaintiff,

v.

OLYMPUS CORPORATION, OLYMPUS IMAGING AMERICA, INC.,

Defendants.

C. A. No. 07-415

FILED
2007 JUN 28 PM 3:45
CLERK U.S. DISTRICT COURT
DISTRICT OF DELAWARE

COMPLAINT FOR PATENT INFRINGEMENT, AND DEMAND FOR JURY TRIAL

Plaintiff, Papst Licensing GmbH & Co. KG ("Papst Licensing"), by and through counsel, for its Complaint against defendants Olympus Corporation ("Olympus"), and Olympus Imaging America, Inc. ("Olympus Imaging") (collectively "the Olympus Defendants"), states as follows:

JURISDICTION AND VENUE

1. This Court has subject matter (federal question) jurisdiction over Papst Licensing's patent infringement claims pursuant to 28 U.S.C. §1331 and 1338(a) because this action arises under the patent laws of the United States. 35 U.S.C. §§ 1, *et seq.*

2. Venue is proper in the District of Delaware pursuant to 28 U.S.C. §§ 1391(c), 1391(d) and 1400(b).

3. Papst Licensing is a company existing under the laws of The Federal Republic of Germany with its principal place of business headquartered at Bahnofstrasse 33, 78112 St. Georgen, Germany.

EXHIBIT E

4. Upon information and belief, Olympus is located at Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo 163-0914, Japan.

5. Upon information and belief, Olympus is a multinational corporation having an established and on-going business throughout the United States, and particularly, transacts business in this judicial district through Olympus Imaging. Olympus Imaging is a corporation organized and existing under the laws of the State of Delaware and is located at 3500 Corporate Parkway, Center Valley, PA 18034.

6. Upon information and belief, Olympus is the ultimate parent company of Olympus Imaging.

FACTS GIVING RISE TO THIS ACTION

7. The patents listed in Paragraph Nos. 8 and 9 below cover, *inter alia*, various aspects of digital cameras. Unless otherwise specified, the said patents are collectively referred to hereinafter as the "Patents in Suit." Papst Licensing is the lawful owner, by assignment, of the entire right, title, and interest in and to the Patents in Suit.

8. United States Patent No. 6,470,399 B1 (the " '399 Patent") duly and legally issued on October 22, 2002. A copy of the '399 Patent is attached hereto as Exhibit A.

9. United States Patent No. 6,895,449 B2 (the " '449 Patent") duly and legally issued on May 17, 2005. A copy of the '449 Patent is attached hereto as Exhibit B.

10. Upon information and belief the Olympus Defendants have made, used, sold or offered to sell to numerous customers in the United States, or have imported into the United States, digital cameras which infringe the Patents in Suit.

11. A reasonable opportunity for further investigation or discovery is likely to provide evidentiary support that the Olympus Defendants have actively induced others and/or contributed to the infringement of the Patents in Suit.

12. A reasonable opportunity for further investigation or discovery is likely to provide evidentiary support that the Olympus Defendants committed the acts of infringement described herein willfully.

13. Papst Licensing has given written notice of infringement to the Olympus Defendants.

14. Upon information and belief, the Olympus Defendants have been and still are committing the acts of infringement described herein and will continue to do so unless enjoined by this Court.

DEMAND FOR JURY TRIAL

Plaintiff respectfully requests a trial by jury of all issues so triable.

REQUESTED RELIEF

WHEREFORE, Papst Licensing respectfully requests the following relief:

1. the entry of judgment in favor of Pabst Licensing, and against the Olympus Defendants, finding that the Olympus Defendants have infringed the Patents in Suit;

2. the entry of judgment in favor of Pabst Licensing, and against the Olympus Defendants, awarding Pabst Licensing damages adequate to compensate it for the Olympus Defendants' acts of infringement;

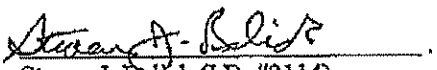
3. the entry of judgment in favor of Pabst Licensing, and against the Olympus Defendants, awarding Pabst Licensing all applicable interest (including pre-judgment and post-

judgment interest), costs, an increase of damages to three times the amount of damages found or assessed, and attorneys' fees;

4. the entry of a permanent injunction enjoining the Olympus Defendants, and all those acting in concert or participation with them, from further acts of infringement; and

5. such other and further relief as the Court deems just and proper.

ASHBY & GEDDES



Steven J. Balick (I.D. #2114)
John G. Day (I.D. #2403)
Lauren E. Maguire (I.D. #4261)
500 Delaware Avenue, 8th Floor
Wilmington, DB 19801
(302) 654-1888
sbalick@ashby-geddes.com
jday@ashby-geddes.com
lamguire@ashby-geddes.com

Attorneys for PAPST LICENSING GmbH & Co. KG

Of Counsel:
Jerold B. Schnayer
John L. Ambrogi
WELSH & KATZ, LTD.
120 South Riverside Plaza, 22nd Floor
Chicago, Illinois 60606
(312) 655-1500

Dated: June 28, 2007

181691.1

Exhibit A

US006470399B1

(12) **United States Patent**
Tasler

(10) Patent No.: **US 6,470,399 B1**
(45) Date of Patent: **Oct. 22, 2002**

(54) **FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE**

(75) Inventor: Michael Tasler, Würzburg (DE)

(73) Assignee: Labortechnik Tasler GmbH, Wuerzburg (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/331,002

(22) PCT Filed: Mar. 3, 1998

(86) PCT No.: PCT/EP98/01187

§ 371 (c)(1),
(2), (4) Date: Jan. 14, 1999

(87) PCT Pub. No.: WO98/39710

PCT Pub. Date: Sep. 11, 1998

(30) Foreign Application Priority Data

Mar. 4, 1997 (DE) 197 08 755

(51) Int. Cl.[7] G06F 13/14
(52) U.S. Cl. 710/16; 710/62; 710/63
(58) Field of Search 710/15, 16, 11, 710/12, 62, 63, 64; 703/23, 24, 25

(56) References Cited

U.S. PATENT DOCUMENTS

5,291,611	A		3/1994	Davis et al.
5,297,124	A	*	3/1994	Plotkin et al. 703/25
5,430,855	A	*	7/1995	Walsh et al. 703/23
5,444,644	A		8/1995	Divjak
5,487,154	A		1/1996	Gunji
5,499,378	A	*	3/1996	McNeill et al. 703/24
5,505,692	A		4/1996	Murata
5,510,774	A		4/1996	Londa
5,548,783	A	*	8/1996	Jones et al. 710/15
6,012,113	A	*	1/2000	Tuckner 710/64

FOREIGN PATENT DOCUMENTS

DE	195 28 889	A1	2/1997
EP	0 436 458	A2	7/1991
EP	0 685 799	A1	12/1995
JP	06301607	A	10/1994
JP	08110883	A	4/1996
WO	WO94/19746		9/1994

OTHER PUBLICATIONS

Steve Martin, "PC-based Data Acquisition in an Industrial Environment," pp. 1–3 (1990).
Payne et al., "High Speed PC-based Data Acquisition Systems," IEEE, pp. 2140–2145 (1995).
National Instruments Corporation, "Dynamic Signal Acquisition and DSP Board for the PC AT," IEEE 488 and VXIbus Control, Data Acquisition, and Analysis, pp. 3–118–3–123, (1994).
IBM Corporation, "Communication Method between Devices through FDD Interface," IBM Technical Disclosure Bulletin, vol. 38 (No. 05), p. 245 (May, 1995).

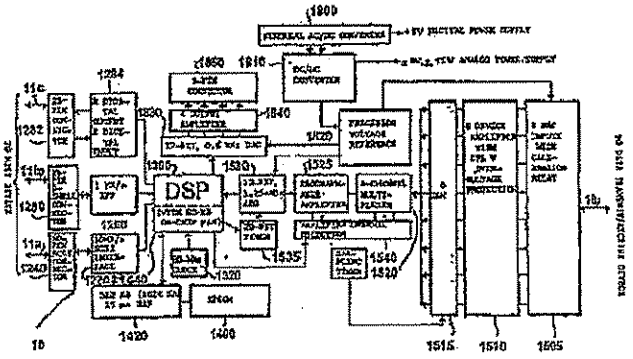
* cited by examiner

Primary Examiner—Thomas Lee
Assistant Examiner—Thuan Du
(74) *Attorney, Agent, or Firm*—Patton Boggs LLP

(57) ABSTRACT

An interface device (10) provides fast data communication between a host device with input/output interfaces and a data transmit/receive device, wherein the interface device (10) comprises a processor means (13), a memory means (14), a first connecting device (12) for interfacing the host device with the interface device, and a second connecting device (15) for interfacing the interface device (10) with the data transmit/receive device. The interface device (10) is configured by the processor means (13) and the memory means (14) in such a way that, when receiving an inquiry from the host device via the first connecting device (12) as to the type of a device attached to the host device, regardless of the type of the data transmit/receive device, the interface device sends a signal to the host device via the first connecting device (12) which signals to the host device that it is communicating with an input/output device.

15 Claims, 2 Drawing Sheets



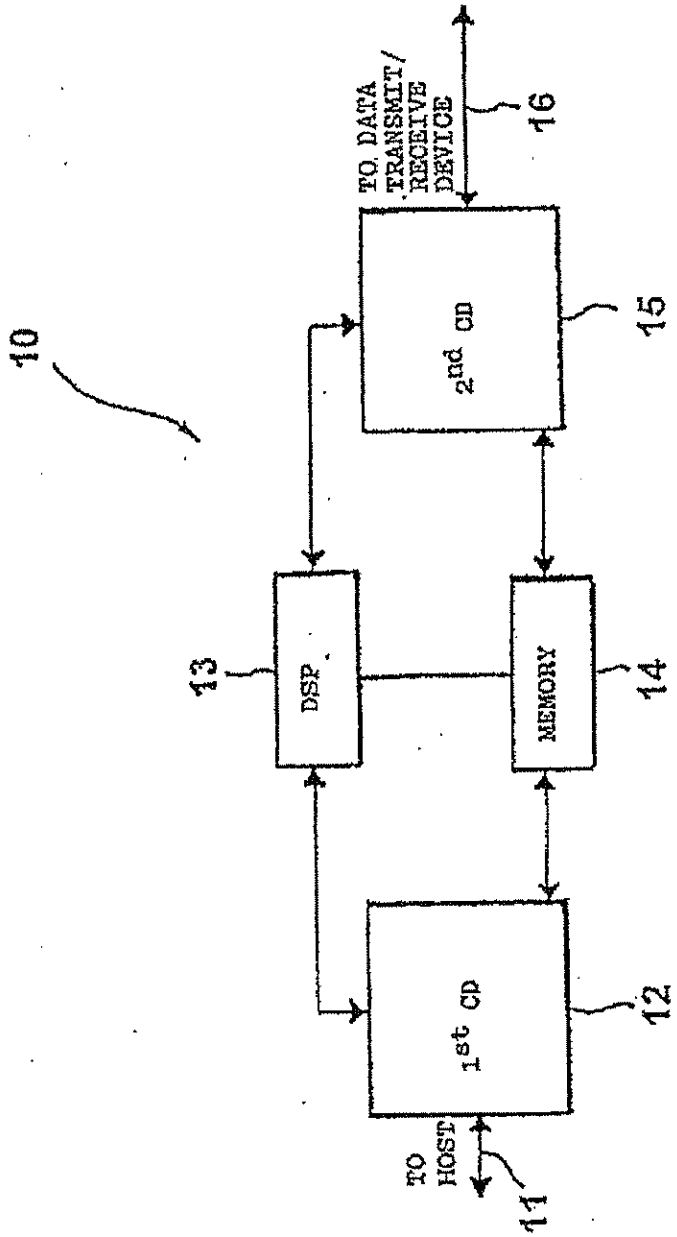

10
TO DATA TRANSMIT/ RECEIVE DEVICE
16
2nd CD
15
13
DSP
MEMORY
14
1st CD
12
TO HOST
11

FIG. 1

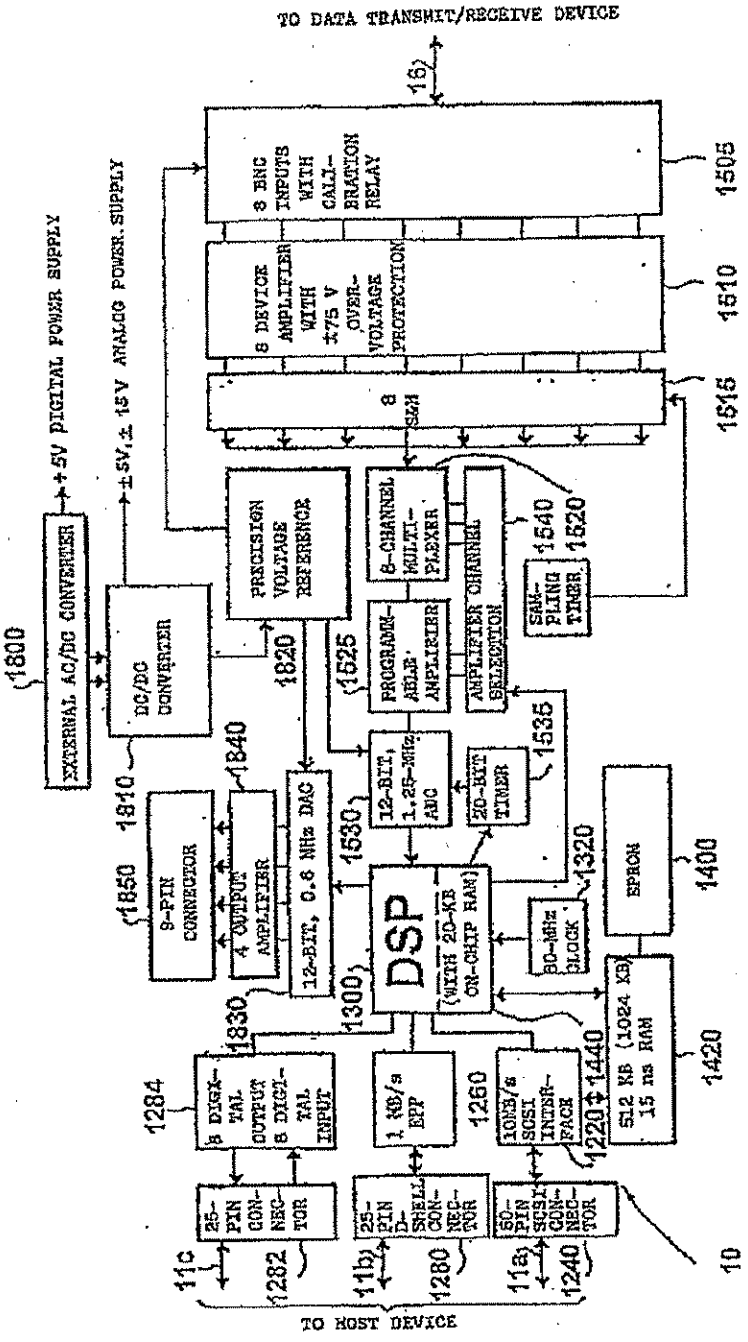

TO DATA TRANSMIT/RECEIVE DEVICE
16
8 BNC INPUTS WITH CALI-BRATION RELAY
1505
8 DEVICE AMPLIFIER WITH ±75 V OVER-VOLTAGE PROTECTION
1510
8 S&H
1515
+5V DIGITAL POWER SUPPLY
±5V, ± 15V ANALOG POWER SUPPLY
EXTERNAL AC/DC CONVERTER
1800
DC/DC CONVERTER
1810
PRECISION VOLTAGE REFERENCE
1820
8-CHANNEL MULTI-PLEXER
1540
1520
PROGRAM-MABLE AMPLIFIER
1525
AMPLIFIER CHANNEL SELECTION
SAM-PLING TIMER
1535
12-BIT, 1.25-MHz ADC
1530
20-BIT TIMER
9-PIN CONNECTOR
1850
4 OUTPUT AMPLIFIER
1840
12-BIT, 0.6 MHz DAC
DSP
(WITH 20-KB ON-CHIP RAM)
1300
80-MHz CLOCK
1320
EPROM
1400
512 KB (1024 KB) 15 ns RAM
1420
8 DIGI-TAL OUTPUT
8 DIGI-TAL INPUT
1284
1830
1 MB/s EPP
1260
10MB/s SCSI INTER-FACE
1220
1440
25-PIN CON-NEC-TOR
1282
25-PIN D-SHELL CON-NEC-TOR
1280
50-PIN SCSI CON-NEC-TOR
1240
11c
11b
11a
10
TO HOST DEVICE

FIG.2

FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE

FIELD OF THE INVENTION

The present invention relates to the transfer of data and in particular to interfaces devices for communication between a computer or host device and a data transmit/receive device from which data is to be acquired or with which two-way communication is to take place.

BACKGROUND OF THE INVENTION

Existing data acquisition systems for computers are very limited in their areas of application. Generally such systems can be classified into two groups.

In the first group host devices or computer systems are attached by means of an interface to a device whose data is to be acquired. The interfaces of this group are normally standard interfaces which, with specific driver software, can be used with a variety of host systems. An advantage of such interfaces is that they are largely independent of the host device. However, a disadvantage is that they generally require very sophisticated drivers which are prone to malfunction and which limit data transfer rates between the device connected to the interface and the host device and vice versa. Further, it is often very difficult to implement such interfaces for portable systems and they offer few possibilities for adaptation with the result that such systems offer little flexibility.

The devices from which data is to be acquired cover the entire electrical engineering spectrum. In a typical case, it is assumed that a customer who operates, for example, a diagnostic radiology system in a medical engineering environment reports a fault. A field service technician of the system manufacturer visits the customer and reads system log files generated by the diagnostic radiology system by means a portable computer or laptop for example. If the fault cannot be localized or if the fault is intermittent, it will be necessary for the service technician to read not only an error log file but also data from current operation. It is apparent that in this case fast data transfer and rapid data analysis are necessary.

Another case requiring the use of an interface could be, for example, when an electronic measuring device, e.g. a multimeter, is attached to a computer system to transfer the data measured by the multimeter to the computer. Particularly when long-term measurements or large volumes of data are involved is it necessary for the interface to support a high data transfer rate.

From these randomly chosen examples it can be seen that an interface may be put to totally different uses. It is therefore desirable that an interface be sufficiently flexible to permit attachment of very different electrical or electronic systems to a host device by means of the interface. To prevent operator error, it is also desirable that a service technician is not required to operate different interfaces in different ways for different applications but that, if possible, a universal method of operating the interface be provided for a large number of applications.

To increase the data transfer rates across an interface, the route chosen in the second group of data acquisition systems for the interface devices was to specifically match the interface very closely to individual host systems or computer systems. The advantage of this solution is that high data transfer rates are possible. However, a disadvantage is that the drivers for the interfaces of the second group are very closely matched to a single host system with the result that they generally cannot be used with other host systems or their use is very ineffective. Further, such types of interface have the disadvantage that they must be installed inside the computer casing to achieve maximum data transfer rates as they access the internal host bus system. They are therefore generally not suitable for portable host systems in the form of laptops whose minimum possible size leaves little internal space to plug in an interface card.

DESCRIPTION OF PRIOR ART

A solution to this problem is offered by the interface devices of IOtech (business address: 25971 Cannon Road, Cleveland, Ohio 44146, USA) which are suitable for laptops such as the WaveBook/512 (registered trademark). The interface devices are connected by means of a plug-in card, approximately the size of a credit card, to the PCMCIA interface which is now a standard feature in laptops. The plug-in card converts the PCMCIA interface into an interface known in the art as IEEE 1284. The said plug-in card provides a special printer interface which is enhanced as regards the data transfer rate and delivers a data transfer rate of approximately 2 MBps as compared with a rate of approx. 1 MBps for known printer interfaces. The known interface device generally consists of a driver component, a digital signal processor, a buffer and a hardware module which terminates in a connector to which the device whose data is to be acquired is attached. The driver component is attached directly to the enhanced printer interface thus permitting the known interface device to establish a connection between a computer and the device whose data is to be acquired.

In order to work with the said interface, an interface-specific driver must be installed on the host device so that the host device can communicate with the digital signal processor of the interface card. As described above, the driver must be installed on the host device. If the driver is a driver developed specifically for the host device, a high data transfer rate is achieved but the driver cannot be easily installed on a different host system. However, if the driver is a general driver which is as flexible as possible and which can be used on many host devices, compromises must be accepted with regard to the data transfer rate.

Particularly in an application for multi-tasking systems in which several different tasks such as data acquisition, data display and editing are to be performed quasi-simultaneously, each task is normally assigned a certain priority by the host system. A driver supporting a special task requests the central processing system of the host device for processor resources in order to perform its task. Depending on the particular priority assignment method and on the driver implementation, a particular share of processor resources is assigned to a special task in particular time slots. Conflicts arise if one or more drivers are implemented in such a way that they have the highest priority by default, i.e. they are incompatible, as happens in practice in many applications. It may occur that both drivers are set to highest priority which, in the worst case, can result in a system crash.

EP 0685799 A1 discloses an interface by means of which several peripheral devices can be attached to a bus. An interface is connected between the bus of a host device and various peripheral devices. The interface comprises a finite

state machine and several branches each of which is assigned to a peripheral device. Each branch comprises a data manager, cycle control, user logic and a buffer. This known interface device provides optimal matching between a host device and a specific peripheral device.

The specialist publication IBM Technical Disclosure Bulletin, Vol. 38, No. 05, page 245; "Communication Method between Devices through FDD Interface" discloses an interface which connects a host device to a peripheral device via a floppy disk drive interface. The interface consists in particular of an address generator, an MFM encoder/decoder, a serial/parallel adapter and a format signal generator. The 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. However, this document contains no information as to how communication should be possible if the interface is connected to a multi-purpose interface instead of to a floppy disk drive controller.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide an interface device for communication between a host device and a data transmit/receive device whose use is host device-independent and which delivers a high data transfer rate.

In accordance with a first aspect of the present invention, this object is met by an interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device comprising: a processor; a memory; a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and a second connecting device for interfacing the interface device with the data transmit/receive device, 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 an input/output device customary in a host device, 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 accordance with a second aspect of the present invention, this object is met by an interface device for communication between a host device, which comprises a multi-purpose interface and a specific driver for this interface, and a data transmit/receive device comprising: a processor; a memory; a first connecting device for interfacing the host device with the interface device via the multi-purpose interface of the host device; and a second connecting device for interfacing the interface device with the data transmit/receive device, wherein the interface device is configured using 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 at 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, whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface.

In accordance with a third aspect of the present invention, this object is met by a method of communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device via an interface device comprising the steps of interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device; interfacing of the data transmit/receive device with a second connecting device of the interface device; 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; 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 in such a way that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the usual driver for the input/output device.

The present invention is based on the finding that both a high data transfer rate and host device-independent use can be achieved if a driver for an input/output device customary in a host device, normally present in most commercially available host devices, is utilized. Drivers for input/output devices customary in a host device which are found in practically all host devices are, for example, drivers for hard disks, for graphics devices or for printer devices. As however the hard disk interfaces in common host devices which can be, for example, IBM PCs, IBM-compatible PCs, Commodore PCs, Apple computers or even workstations, are the interfaces with the highest data transfer rate, the hard disk driver is utilized in the preferred embodiment of the interface device of the present invention. Drivers for other storage devices such as floppy disk drives, CD-ROM drives or tape drives could also be utilized in order to implement the interface device according to the present invention.

As described in the following, the interface device according to the present invention is to be attached to a host device by means of a multi-purpose interface of the host device which can be implemented, for example, as an SCSI interface or as an enhanced printer interface. Multi-purpose interfaces comprise both an interface card and specific driver software for the interface card. The driver software can be designed so that it can replace the BIOS driver routines. Communication between the host device and the devices attached to the multi-purpose interface then essentially takes place by means of the specific driver software for the multi-purpose interface and no longer primarily by means of BIOS routines of the host device. Recently however drivers for multi-purpose interfaces can also already be integrated in the BIOS system of the host device as, alongside classical input/output interfaces, multi-purpose interfaces are becoming increasingly common in host devices. It is of course also possible to use BIOS routines in parallel with the specific driver software for the multi-purpose interface, if this is desired.

The interface device according to the present invention comprises a processor means, a memory means, a first connecting device for interfacing the host device with the interface device, and a second connecting device for interfacing the interface device with the data transmit/receive device. The interface device is configured by the processor means and the memory means in such a way that the interface device, when receiving an inquiry from the host

device via the first connecting device as to the type of a device attached to the host device, sends a signal, regardless of the type of the data transmit/receive device, to the host device via the first connecting device which signals to the host device that it is communicating with an input/output device. The interface device according to the present invention therefore simulates, both in terms of hardware and software, the way in which a conventional input/output device functions, preferably that of a hard disk drive. As support for hard disks is implemented as standard in all commercially available host systems, the simulation of a hard disk, for example, can provide host device-independent use. The interface device according to the present invention therefore no longer communicates with the host device or computer by means of a specially designed driver but by means of a program which is present in the BIOS system (Basic Input/Output System) and is normally precisely matched to the specific computer system on which it is installed, or by means of a specific program for the multi-purpose interface. Consequently, the interface device according to the present invention combines the advantages of both groups. On the one hand, communication between the computer and the interface takes place by means of a host device-specific BIOS program or by means of a driver program which is matched to the multi-purpose interface and which could be regarded as a "device-specific driver". On the other hand, the BIOS program or a corresponding multi-purpose interface program which operates one of the common input/output interfaces in host systems is therefore present in all host systems so that the interface device according to the present invention is host device-independent.

BRIEF DESCRIPTION OF THE DRAWINGS

In the following, preferred embodiments of the present invention will be explained in more detail with reference to the drawings enclosed, in which:

FIG. 1 shows a general block diagram of the interface device according to the present invention; and

FIG. 2 shows detailed block diagram of an interface device according to a preferred embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

FIG. 1 shows a general block diagram of an interface device 10 according to the present invention. A first connecting device 12 of the interface device 10 can be attached to a host device (not shown) via a host line 11. The first connecting device is attached both to a digital signal processor 13 and to a memory means 14. The digital signal processor 13 and the memory means 14 are also attached to a second connecting device 15 by means of bidirectional communication lines (shown for all lines by means of two directional arrows). The second connecting device can be attached by means of an output line 16 to a data transmit/receive device which is to receive data from the host device or from which data is to be read, i.e. acquired, and transferred to the host device. The data transmit/receive device itself can also communicate actively with the host device via the first and second connecting device, as described in more detail in the following.

Communication between the host system or host device and the interface device is based on known standard access commands as supported by all known operating systems (e.g. DOS, Windows, Unix). Preferably, the interface device according to the present invention simulates a hard disk with a root directory whose entries are "virtual" files which can be created for the most varied functions. When the host device system with which the interface device according to the present invention is connected is booted and a data transmit/receive device is also attached to the interface device 10, usual BIOS routines or multi-purpose interface programs issue an instruction, known by those skilled in the art as the INQUIRY instruction, to the input/output interfaces in the host device. The digital signal processor 13 receives this inquiry instruction via the first connecting device and generates a signal which is sent to the host device (not shown) again via the first connecting device 12 and the host line 11. This signal indicates to the host device that, for example, a hard disk drive is attached at the interface to which the INQUIRY instruction was sent. Optionally, the host device can send an instruction, known by those skilled in the art as "Test Unit Ready", to the interface device to request more precise details regarding the queried device.

Regardless of which data transmit/receive device at the output line 16 is attached to the second connecting device, the digital signal processor 13 informs the host device that it is communicating with a hard disk drive. If the host device receives the response that a drive is present, it then sends a request to the interface device 10 to read the boot sequence which, on actual hard disks, normally resides on the first sectors of the disk. The digital signal processor 13, whose operating system in stored in the memory means 14, responds to this instruction by sending to the host device a virtual boot sequence which, in the case of actual drives, includes the drive type, the starting position and the length of the file allocation table (FAT), the number of sectors, etc., known to those skilled in the art. Once the host device has received this data, it assumes that the interface device 10 according to a preferred embodiment of the present invention is a hard disk drive. In reply to an instruction from the host device to display the directory of the "virtual" hard disk drive simulated by the interface device 10 with respect to the host device, the digital signal processor can respond to the host device in exactly the same way as a conventional hard disk would, namely by reading on request the file allocation table or FAT on a sector specified in the boot sequence, normally the first writable sector, and transferring it to the host device, and subsequently by transferring the directory structure of the virtual hard disk. Further, it is possible that the FAT is not read until immediately prior to reading or storing the data of the "virtual" hard disk and not already at initialization.

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.

Preferably, the volume of data to be acquired by a data transmit/receive device is specified in a configuration file described in the following by the user specifying in the said configuration file that a measurement is to last, for example, five minutes. To the host device the "real-time input" file then appears as a file whose length corresponds to the anticipated volume of data in those five minutes. Those skilled in the art know that communication between a processor and a hard disk consists of the processor transferring to the hard disk the numbers of the blocks or clusters or sectors whose contents it wishes to read. By reference to the FAT the processor knows which information is contained in which block. In this case, communication between the host device and the interface device according to the present invention therefore consists of the very fast transfer of block numbers and preferably of block number ranges because a virtual "real-time input" file will not be fragmented. If the host device now wants to read the "real-time input" file, it transfers a range of block numbers to the interface device, whereupon data commences to be received via the second connecting device and data commences to be sent to the host device via the first connecting device.

In addition to the digital signal processor instruction memory, which comprises the operating system of the digital signal processor and can be implemented as an EPROM or EEPROM, the memory means 14 can have an additional buffer for purposes of synchronizing data transfer from the data transmit/receive device to the interface device 10 and data transfer from the interface device 10 to the host device. Preferably, the buffer is implemented as a fast random access memory or RAM buffer.

Further, from the host device the user can also create a configuration file, whose entries automatically set and control various functions of the interface device 10, on the interface device 10 which appears to the host device as a hard disk. These settings can be, for example, gain, multiplex or sampling rate settings. By creating and editing a configuration file, normally a text file which is simple to understand with little prior knowledge, users of the interface device 10 are able to perform essentially identical operator actions for almost any data transmit/receive devices which can be attached to the second connecting device via the line 16, thus eliminating a source of error arising from users having to know many different command codes for different applications. In the case of the interface device 10 according to the present invention it is necessary for users to note the conventions of the configuration file once only in order to be able to use the interface device 10 as an interface between a host device and almost any data transmit/receive device.

As a result of the option of storing any files in agreed formats in the memory means 14 of the interface device 10, taking into account the maximum capacity of the memory means, any enhancements or even completely new functions of the interface device 10 can be quickly implemented. Even files executable by the host device, such as batch files or executable files (BAT or EXE files), and also help files can be implemented in the interface device, thus achieving independence of the interface device 10 from any additional software (with the exception of the BIOS routines) of the host device. On the one hand, this avoids licensing and/or registration problems and, on the other hand, installation of certain routines which can be frequently used, for example an FFT routine to examine acquired time-domain data in the frequency domain, is rendered unnecessary as the EXE files are already installed on the interface device 10 and appear in the virtual root directory, by means of which the host device can access all programs stored on the interface device 10.

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.

For persons skilled in the art it is however obvious that the interface device 10 is not necessarily signed on when the computer system is powered up but that a special BIOS routine or a driver for a multi-purpose interface can also be started on the host device during current operation of the computer system in order to sign on or mount the interface device 10 as an additional hard disk. This embodiment is suitable for larger workstation systems which are essentially never powered down as they perform, e.g. mail functions or monitor processes which run continuously, for example, in multi-tasking environments.

In the interface device according to the present invention an enormous advantage is to be gained, as apparent in the embodiment described in the following, in separating the actual hardware required to attach the interface device 10 to the data transmit/receive device from the communication unit, which is implemented by the digital signal processor 13, the memory means 14 and the first connecting device 12, as this allows a plurality of dissimilar device types to be operated in parallel in identical manner. Accordingly, many interface devices 10 can be connected to a host device which then sees many different "virtual" hard disks. In addition, any modification of the specific hardware symbolized by the second connecting device 15 can be implemented essentially without changing the operation of the interface device according to the present invention. Further, an experienced user can intervene at any time on any level of the existing second connecting device by making use of the above mentioned option of creating a configuration file or adding or storing new program sections for the second connecting device.

An important advantage of the interface device 10 of the present invention is that it also permits extremely high data transfer rates by using, for data interchange, the host device-own BIOS routines which are optimized for each host device by the host device manufacturer or BIOS system manufacturer, or by using driver programs which are normally optimized and included by the manufacturers of multi-purpose interfaces. Furthermore, due to the simulation of a virtual mass storage device, the data is managed and made available in such a way that it can be transferred directly to other storage media, e.g. to an actual hard disk of the host device without, as it were, intervention of the host device processor. The only limitation to long-term data transfer at high speed is therefore imposed exclusively by the speed and the size of the mass storage device of the host device. This is the case as the digital signal processor 13 already formats the data read by the data transmit/receive device via the second connecting device 15 into block sizes suitable for a hard disk of the host device, whereby the data transfer speed is limited only by the mechanical latency of the hard disk system of the host device. At this point, it should be noted that normally data flow from a host device must be formatted in blocks to permit writing to a hard disk and subsequent reading from a hard disk, as known by those skilled in the art.

The said data transfer rate can be increased further by setting up a direct memory access (DMA) or RAM drive in the host system. As those skilled in the art know, the setting up of a RAM drive requires processor resources of the host device, with the result that the advantage of writing the data to a hard disk drive of the host device essentially without the need for processor resources is lost.

As described above, a data buffer can be implemented in the memory means 14 to permit independence in terms of time of the data transmit/receive device attached to the second connecting device from the host device attached to the first connecting device. This guarantees error-free operation of the interface device 10 even for time-critical applications in multi-tasking host systems.

FIG. 2 shows a detailed block diagram of an interface device 10 according to the present invention.

A digital signal processor (DSP) 1300 is, in a manner of speaking, the heart of the interface device 10. The DSP can be any DSP but preferably has a 20-MB on-chip random access memory (RAM). Certain instruction sets, for example, can be stored in the RAM already integrated in the DSP. An 80-MHz clock generator is attached to the DSP 1300 in order to synchronize the DSP. The DSP implements a fast Fourier transformation (FFT) in real time and also optional data compression of the data to be transferred from the data transmit/receive device to the host device in order to achieve greater efficiency and to permit interoperation with host devices which have a smaller memory.

In the preferred embodiment of the interface device 10 shown in FIG. 2, the first connecting device 12 of FIG. 1 contains the following components: an SCSI interface 1220 and a 50-pin SCSI connector 1240 for attachment to an SCSI interface present on most host devices or laptops. The SCSI (small computer system interface) interface 1220 translates the data received via the SCSI connector 1240 into data understood by the DSP 1300, as known by those skilled in the art. Further, the first connecting device 12 comprises an EPP (enhanced parallel port) with a data transfer rate of approx. 1 MBps which delivers a more moderate data transfer rate of 1 MBps by comparison to the data transfer rate of 10 MBps of the SCSI interface. The EPP 1260 is connected to a 25-pin D-shell connector 1280 to permit attachment to a printer interface of a host device for example. Optionally, the first connecting device 12 also comprises a 25-pin connector 1282 which permits the attachment of 8 digital outputs and 8 digital inputs 1284 at a host device.

Preferably, the second connecting device comprises 8 BNC inputs with the calibration relay 1505, a block 1510 with 8 device amplifiers with an overvoltage protection of ±75 V, this block being connected in turn to 8 sample/hold (S&H) circuits 1515. The calibration relays are relays which permit controlled changeover between a test voltage and a calibration reference voltage. Each sample/hold circuit is connected to a corresponding input of an 8-channel multiplexer 1520 which feeds its output signals via a programmable amplifier 1525 into an analog/digital converter (ADC) with 12 bit and 1.25 MHz 1530 and to the DSP 1300. The ADC 1530 is controlled by means of a 20-bit timer 1535, as known by persons skilled in the art. The programmable amplifier 1525 and the 8-channel multiplexer 1520 are controlled via an amplifier channel selection circuit 1540 which is in turn controlled by the DSP 1300.

The complete interface device 10 is supplied with power by an external AC/DC converter 1800 which delivers a digital supply voltage of ±5 V and is attached to a DC/DC converter 1810 which can deliver analog supply voltages of ±5 V and ±15 V as required for the interface device 10. Further, the DC/DC converter controls a precision voltage reference 1820 which controls the 8 BNC inputs 1505 and the ADC 1530 as well as a digital/analog converter (DAC) 1830 which permits, via an output amplifier block with 4 output amplifiers 1840 and a 9-pin connector 1850, analog output direct from the DSP 1300 to an output device, e.g. printer device or monitor device, which can be attached via the 9-pin connector 1850, thus providing the option of monitoring the data transferred to the host device or also, for example, of viewing an FFT to obtain rapid and comprehensive data analysis without using processor time of the host device.

In FIG. 2 the memory means 14 of FIG. 1 is implemented by an EPROM 1400 which, in a preferred embodiment of the present invention, contains the operating system of the digital signal processor 1300. A random access memory with an access time of 15 ns and a size of 512 KB or optionally 1024 KB 1420 serves as a data buffer to achieve independence in terms of time of the output line 16 from the output lines 11*a*, 11*b* and 11*c* to the data transmit/receive device and to the host device respectively. As described above, in a preferred embodiment of the present invention the digital signal processor 1300 already contains a 20-KB on-chip RAM 1440 which can store certain instruction sets, functions and also smaller application software units.

The connection, symbolized by the line 16, of the interface device 10 to any data transmit/receive device implements, by means of the blocks 1505–1535, an analog input with a sampling rate of 1.25 MHz and quantization of 12 bits. There are 8 channels with an overvoltage protection of ±75 V. By means of the programmable amplifier 1525 the channels can be programmed independently of each other in voltage ranges up to a maximum of ±10 V. Unused channels can be grounded internally to reduce channel intermodulation. The block 1515 is implemented as a monolithic high-precision, high-speed sample/hold amplifier for simultaneous sampling of all channels. The precision voltage reference 1820 provides a high-precision, temperature-compensated monolithic energy gap voltage reference for auto-calibration of each channel and each gain. Further, offset fine adjustment for each channel is implemented by the same.

The blocks 1830, 1840 and 1850 implement a direct analog output for the digital signal processor 1300, and the DAC 1830 provides a data transfer rate of 625 kHz and a quantization of 12 bits. The block 1840 comprises 4 channels with a common output latch.

Further, the interface device 10 comprises a digital input/output device implemented by the blocks 1284 and 1282. Here there are 8 digital inputs, 8 digital outputs with a common latch, and the digital port can be attached preferably to a side panel of the interface device 10 so that the port itself can easily be accessed.

The digital signal processor 1300 provides on-board digital data processing. In particular, it is a high-performance DSP with a clock speed of 80 MHz and a 20-bit timer 1535.

As described above, the first connecting device 12 comprises the SCSI interface 1220 with a peak transfer rate of 10 MBps. An optional PCMCIA-to-SCSI adapter permits high-speed communication with laptop computers which are desirable and in widespread use, particularly by mobile service technicians. The EPP 1260 with its associated connector 1280 permits data transfer at a more moderate rate.

As described above, the interface device 10 is supplied with power by means of an external AC/DC adapter which

has a universal power input (85–264 VAC, 47–63 Hz). Interference suppression complies with the standards EN 55022, curve B and FFC, Class B). Further, it is also in accordance with international safety regulations (TÜV, UL, CSA). The interface device 10 is externally shielded and achieves a value of 55 dB at 30–60 MHz and a value of approximately 40 dB at 1 GHz, and therefore complies with the MILSTD 285-1 standard.

As described above, communication between the host device and the multi-purpose interface can take place not only via drivers for input/output device customary in a host device which reside in the BIOS system of the host device but also via specific interface drivers which, in the case of SCSI interfaces, are known as multi-purpose interface ASPI (advanced SCSI programming interface) drivers. This ASPI driver, which can also be referred to as an ASPI manager, is specific to a special SCSI host adapter, i.e. to a special multi-purpose interface, and is normally included by the manufacturer of the multi-purpose interface. Generally speaking, this multi-purpose interface driver has the task of moving precisely specified SCSI commands from the host system program to the host system SCSI adapter. For this reason, the command set is almost identical to that of the SCSI interface itself. Essentially, only status and reset commands for the host adapter have been added.

The ASPI driver can be used if the hard disk was not already addressable at boot time or if the SCSI-related BIOS routines of the host computer were still disabled. Here too, the steps needed to initialize the interface device, preferably as a virtual hard disk, are similar to the steps taken when initializing at boot time.

In general terms, the ASPI manager comprises two sides. One side is the proprietary, hardware-oriented side. It is responsible for converting all commands into a form required by the corresponding multi-purpose interface. The hardware-oriented side of the ASPI driver is therefore matched to a very specific type of multi-purpose interface or SCSI interface. The other side is known as the user software side. This side is totally independent of the proprietary operating characteristics of the SCSI adapter and is therefore identical for all SCSI interfaces. This permits SCSI programming which is however independent of the individual SCSI adapter types.

In contrast to communication between the host device and the interface device according to the present invention on the basis of a BIOS driver, the use of such an ASPI driver for communication between the host device and the interface device according to the present invention allows various further possibilities of the SCSI multi-purpose interface to be exploited. In the case described above, the interface device which preferably signs on and behaves as a virtual hard disk is detected by the BIOS driver of the host computer at boot time and is configured as a hard disk. This step does not however support active requests sent by the interface device to the host computer. If however the virtual hard disk wishes to write data actively to, for example, a hard disk of the host computer or wishes to initiate communication with the processor of the host computer, the host computer must recognize the request of the virtual hard disk and tolerate a further issuer of instructions on its bus. If the interface device behaves solely like a virtual hard disk, it would always receive and never issue commands. The BIOS has no objections to an additional issuer of commands that actively wishes to place data on the bus of the host device but the BIOS does not support the host device in recognizing corresponding requests of the interface device or in granting the interface device permission to access the bus.

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. Thereupon, the interface device according to the present invention can write the desired data to the SCSI hard disk of the host computer totally independently of the host computer or can communicate with the same in some other manner. The interface device according to the present invention therefore initially behaves passively as a virtual hard disk and then, as required and using the driver software for the multi-purpose interface, actively on the same SCSI bus. This means however that the interface device according to the present invention, using a driver software for the multi-purpose interface which comprises the BIOS routines customary in host devices and simultaneously provides the option of active participation, can, regardless of the type of the data transmit/receive device attached to the second connecting device, behave initially as a virtual and at the same time passive hard disk but can, as required, participate actively on the bus so as to be able to initiate communication directly with other SCSI hard disks of the host device by bypassing the processor of the host device.

Using a standard interface of a host device, the interface device according to the present invention permits communication with any host device. By simulating an input/output device to the host device and, in a preferred embodiment, by simulating a virtual mass storage device, the interface device 10 is automatically supported by all known host systems without any additional sophisticated driver software. The simulation of a freely definable file structure on the "virtual" hard disk provides simple operation and expansion options and, through the implementation of any programs, independence from special software implemented on the host device. Help files included on the interface device 10 and plug-and-play support ensure ease of use even in portable, flexible host devices. Despite the very simple user interface, experienced users are free at any time to intervene in the functions of the interface device 10 on system level. The interface device 10 thus provides a universal solution which can cover the entire spectrum of possible data transmit/receive devices.

What is claimed is:

1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising:

a processor;

a memory;

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

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,

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, 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

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.

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.

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.

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.

5. An interface device according to claim 1,

wherein the processor is a digital signal processor.

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.

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.

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.

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.

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.

11. An interface device for communication between a host device, which comprises a multi-purpose interface and a specific driver for this interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, comprising:

a processor;

a memory;

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

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,

where the interface device is configured using 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 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, 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, whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and

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.

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.

13. An interface device according to claim 11,

wherein the multi-purpose interface is an SCSI interface, and wherein the specific driver for the multi-purpose interface is an ASPI manager.

14. A method of communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device, the data transmit/receive device being arranged for providing analog data, via an interface device, comprising:

interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;

interfacing of the data transmit/receive device with a second connecting device of the interface 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;

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;

regardless of the type of the data transmit/receive data attached to the second connecting devices of the interface device, responding to the inquiry from the host device by the interface device in such a way that it is an input/output device customary in a host device, whereupon the host device communicates with the interface device by means of the usual driver for the input/output device, and

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.

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.

* * * * *

Exhibit B

US006895449B2

(12) **United States Patent**
Tasler

(10) **Patent No.: US 6,895,449 B2**
(45) **Date of Patent: May 17, 2005**

(54) **FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE**

(75) Inventor: Michael Tasler, Wuerzburg (DE)

(73) Assignee: Labortechnik Tasler GmbH, Wuerzburg (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 369 days.

(21) Appl. No.: 10/219,105

(22) Filed: Aug. 15, 2002

(65) Prior Publication Data

US 2002/0199037 A1 Dec. 26, 2002

Related U.S. Application Data

(62) Division of application No. 09/331,002, filed on Jun. 14, 1999.

(30) Foreign Application Priority Data

Mar. 4, 1997 (DE) 197 08 755
Mar. 3, 1998 (EP) PCT/EP98/01187

(51) Int. Cl.[7] G06F 13/14

(52) U.S. Cl. 710/16; 710/8; 710/64; 709/220

(58) Field of Search 710/8, 16, 64, 710/11, 12, 15, 62, 63; 703/23, 24, 25; 709/220, 222

(56) References Cited

U.S. PATENT DOCUMENTS

5,548,783	A *	8/1996	Jones et al.	710/16
5,596,628	A *	1/1997	Klein	379/93.11
5,628,030	A *	5/1997	Tuckner	710/64
6,012,113	A *	1/2000	Tuckner	710/64
6,266,711	B1 *	7/2001	Ishikawa et al.	710/8
6,363,081	B1 *	3/2002	Gase	370/466
6,725,293	B1 *	4/2004	Nakayama et al.	710/36
6,728,844	B2 *	4/2004	Sanada et al.	711/152

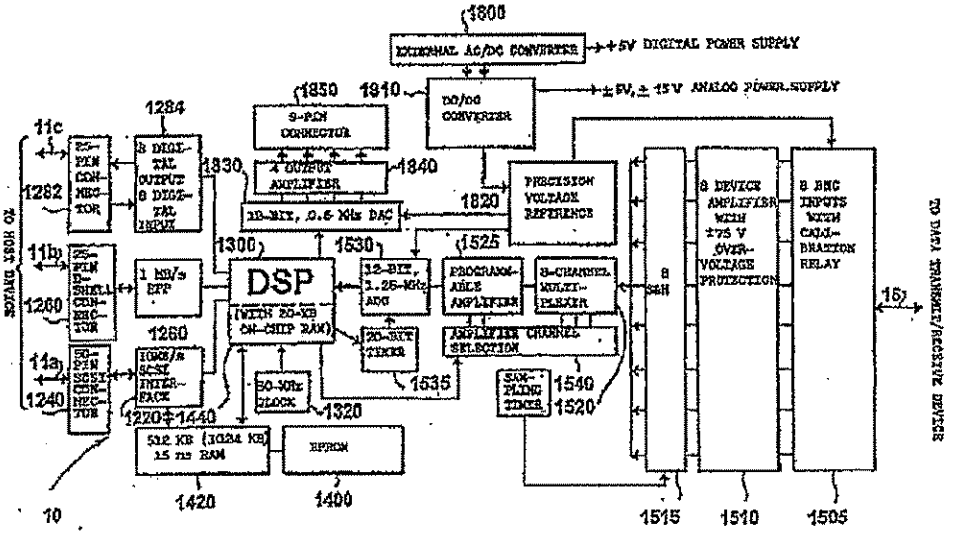
* cited by examiner

Primary Examiner—Jeffrey Gaffin
Assistant Examiner—Harold Kim
(74) *Attorney, Agent, or Firm*—Glenn Patent Group; Michael A. Glenn

(57) **ABSTRACT**

An interface device (10) provides fast data communication between a host device with input/output interfaces and a data transmit/receive device, wherein the interface device (10) comprises a processor means (13), a memory means (14), a first connecting device (12) for interfacing the host device with the interface device, and a second connecting device (15) for interfacing the interface device (10) with the data transmit/receive device. The interface device (10) is configured by the processor means (13) and the memory means (14) in such a way that, when receiving an inquiry from the host device via the first connecting device (12) as to the type of a device attached to the host device, regardless of the type of the data transmit/receive device, the interface device sends a signal to the host device via the first connecting device (12) which signals to the host device that it is communicating with an input/output device.

18 Claims, 2 Drawing Sheets



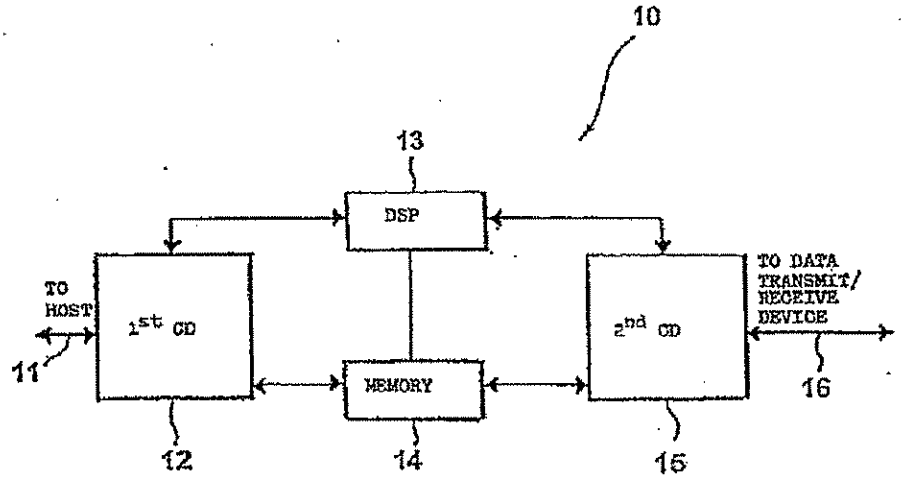

10
13
DSP
TO HOST
1st CD
2nd CD
TO DATA TRANSMIT/ RECEIVE DEVICE
MEMORY
11
12
14
15
16

FIG.1

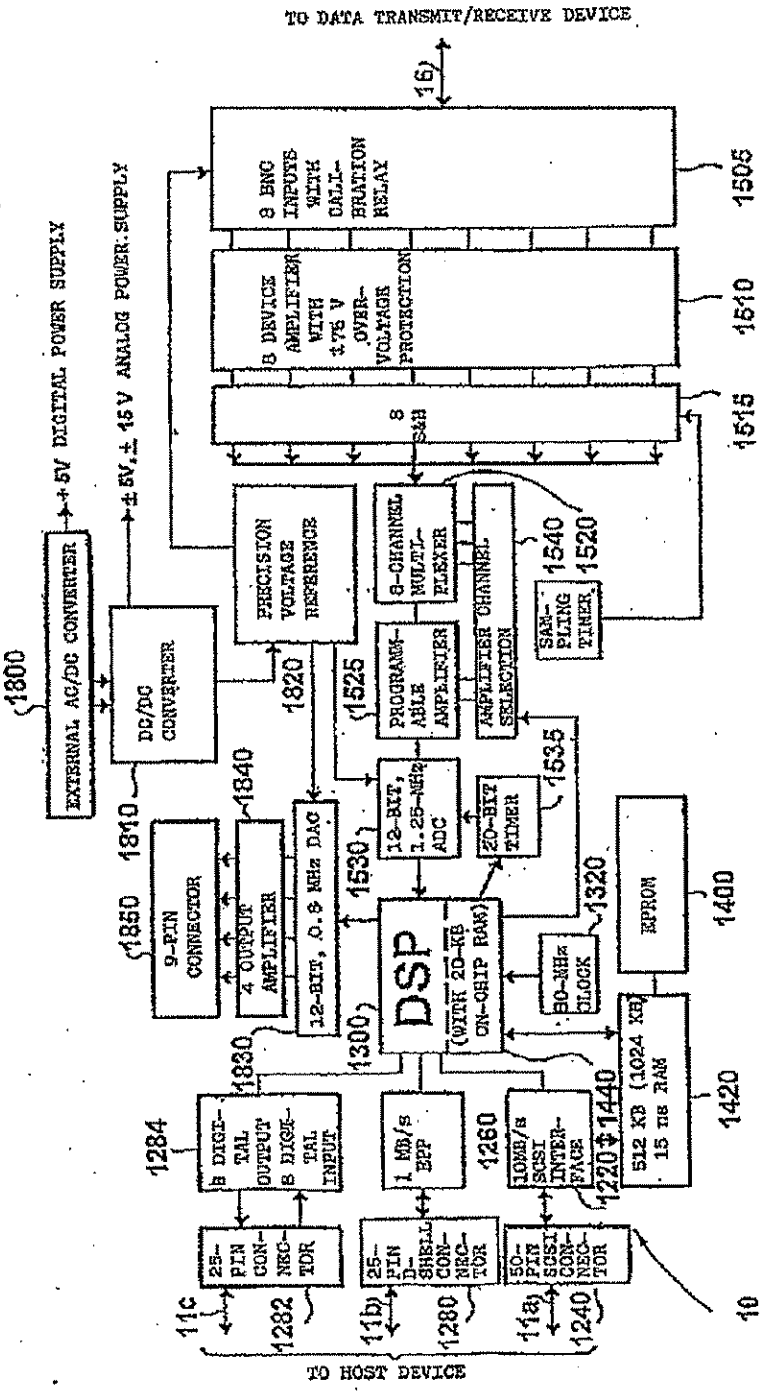

TO DATA TRANSMIT/RECEIVE DEVICE
16
8 BNC INPUTS WITH CALIBRATION RELAY
1505
8 DEVICE AMPLIFIER WITH ±75 V OVERVOLTAGE PROTECTION
1510
8 S&H
1515
EXTERNAL AC/DC CONVERTER
1800
+5V DIGITAL POWER SUPPLY
±5V, ±15V ANALOG POWER SUPPLY
DC/DC CONVERTER
1810
PRECISION VOLTAGE REFERENCE
1820
8-CHANNEL MULTIPLEXER
1540
1520
SAMPLING TIMER
PROGRAMMABLE AMPLIFIER
1525
AMPLIFIER CHANNEL SELECTION
12-BIT, 1.25-MHz ADC
1530
20-BIT TIMER
1535
12-BIT, 0.8 MHz DAC
1840
9-PIN CONNECTOR
1850
4 OUTPUT AMPLIFIER
DSP
(WITH 20 KB ON-CHIP RAM)
1300
80-MHz CLOCK
1320
EPROM
1400
512 KB (1024 KB) 15 ns RAM
1420
1440
1220
8 DIGITAL OUTPUT
8 DIGITAL INPUT
1284
1 MB/s EPP
1260
10MB/s SCSI INTERFACE
25-PIN CONNECTOR
1282
25-PIN D-SHELL CONNECTOR
1280
50-PIN SCSI CONNECTOR
1240
11c
11b
11a
10
TO HOST DEVICE

FIG.2

FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE

RELATED APPLICATIONS

This application is a divisional application of copending application Ser. No. 09/331,002 filed Jun. 14, 1999.

DESCRIPTION

The present invention relates to the transfer of data and in particular to interface devices for communication between a computer or host device and a data transmit/receive device from which data is to be acquired or with which two-way communication is to take place.

Existing data acquisition systems for computers are very limited in their areas of application. Generally such systems can be classified into two groups.

In the first group host devices or computer systems are attached by means of an interface to a device whose data is to be acquired. The interfaces of this group are normally standard interfaces which, with specific driver software, can be used with a variety of host systems. An advantage of such interfaces is that they are largely independent of the host device. However, a disadvantage is that they generally require very sophisticated drivers which are prone to malfunction and which limit data transfer rates between the device connected to the interface and the host device and vice versa. Further, it is often very difficult to implement such interfaces for portable systems and they offer few possibilities for adaptation with the result that such systems offer little flexibility.

The devices from which data is to be acquired cover the entire electrical engineering spectrum. In a typical case, it is assumed that a customer who operates, for example, a diagnostic radiology system in a medical engineering environment reports a fault. A field service technician of the system manufacturer visits the customer and reads system log files generated by the diagnostic radiology system by means a portable computer or laptop for example. If the fault cannot be localized or if the fault is intermittent, it will be necessary for the service technician to read not only an error log file but also data from current operation. It is apparent that in this case fast data transfer and rapid data analysis are necessary.

Another case requiring the use of an interface could be, for example, when an electronic measuring device, e.g. a multimeter, is attached to a computer system to transfer the data measured by the multimeter to the computer. Particularly when long-term measurements or large volumes of data are involved is it necessary for the interface to support a high data transfer rate.

From these randomly chosen examples it can be seen that an interface may be put to totally different uses. It is therefore desirable that an interface be sufficiently flexible to permit attachment of very different electrical or electronic systems to a host device by means of the interface. To prevent operator error, it is also desirable that a service technician is not required to operate different interfaces in different ways for different applications but that, if possible, a universal method of operating the interface be provided for a large number of applications.

To increase the data transfer rates across an interface, the route chosen in the second group of data acquisition systems

for the interface devices was to specifically match the interface very closely to individual host systems or computer systems. The advantage of this solution is that high data transfer rates are possible. However, a disadvantage is that the drivers for the interfaces of the second group are very closely matched to a single host system with the result that they generally cannot be used with other host systems or their use is very ineffective. Further, such types of interface have the disadvantage that they must be installed inside the computer casing to achieve maximum data transfer rates as they access the internal host bus system. They are therefore generally not suitable for portable host systems in the form of laptops whose minimum possible size leaves little internal space to plug in an interface card.

A solution to this problem is offered by the interface devices of IOtech (business address: 25971 Cannon Road, Cleveland, Ohio 44146, USA) which are suitable for laptops such as the WaveBook/512 (registered trademark). The interface devices are connected by means of a plug-in card, approximately the size of a credit card, to the PCMCIA interface which is now a standard feature in laptops. The plug-in card converts the PCMCIA interface into an interface known in the art as IEEE 1284. The said plug-in card provides a special printer interface which is enhanced as regards the data transfer rate and delivers a data transfer rate of approximately 2 MBps as compared with a rate of approx. 1 MBps for known printer interfaces. The known interface device generally consists of a driver component, a digital signal processor, a buffer and a hardware module which terminates in a connector to which the device whose data is to be acquired is attached. The driver component is attached directly to the enhanced printer interface thus permitting the known interface device to establish a connection between a computer and the device whose data is to be acquired.

In order to work with the said interface, an interface-specific driver must be installed on the host device so that the host device can communicate with the digital signal processor of the interface card. As described above, the driver must be installed on the host device. If the driver is a driver developed specifically for the host device, a high data transfer rate is achieved but the driver cannot be easily installed on a different host system. However, if the driver is a general driver which is as flexible as possible and which can be used on many host devices, compromises must be accepted with regard to the data transfer rate.

Particularly in an application for multi-tasking systems in which several different tasks such as data acquisition, data display and editing are to be performed quasi-simultaneously, each task is normally assigned a certain priority by the host system. A driver supporting a special task requests the central processing system of the host device for processor resources in order to perform its task. Depending on the particular priority assignment method and on the driver implementation, a particular share of processor resources is assigned to a special task in particular time slots. Conflicts arise if one or more drivers are implemented in such a way that they have the highest priority by default, i.e. they are incompatible, as happens in practice in many applications. It may occur that both drivers are set to highest priority which, in the worst case, can result in a system crash.

EP 0685799 A1 discloses an interface by means of which several peripheral devices can be attached to a bus. An interface is connected between the bus of a host device and various peripheral devices. The interface comprises a finite state machine and several branches each of which is assigned to a peripheral device. Each branch comprises a

data manager, cycle control, user logic and a buffer. This known interface device provides optimal matching between a host device and a specific peripheral device.

The specialist publication IBM Technical Disclosure Bulletin, Vol. 38, No: 05, page 245; "Communication Method between Devices through FDD Interface" discloses an interface which connects a host device to a peripheral device via a floppy disk drive interface. The interface consists in particular of an address generator, an MFM encoder/decoder, a serial/parallel adapter and a format signal generator. The 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. However, this document contains no information as to how communication should be possible if the interface is connected to a multi-purpose interface instead of to a floppy disk drive controller.

It is the object of the present invention to provide an interface device for communication between a host device and a data transmit/receive device whose use is host device-independent and which delivers a high data transfer rate.

This object is achieved by an interface device according to claim 1 or 12 and by a method according to claim 15.

The present invention is based on the finding that both a high data transfer rate and host device-independent use can be achieved if a driver for an input/output device customary in a host device, normally present in most commercially available host devices, is utilized. Drivers for input/output devices customary in a host device which are found in practically all host devices are, for example, drivers for hard disks, for graphics devices or for printer devices. As however the hard disk interfaces in common host devices which can be, for example, IBM PCs, IBM-compatible PCs, Commodore PCs, Apple computers or even workstations, are the interfaces with the highest data transfer rate, the hard disk driver is utilized in the preferred embodiment of the interface device of the present invention. Drivers for other storage devices such as floppy disk drives, CD-ROM drives or tape drives could also be utilized in order to implement the interface device according to the present invention.

As described in the following, the interface device according to the present invention is to be attached to a host device by means of a multi-purpose interface of the host device which can be implemented, for example, as an SCSI interface or as an enhanced printer interface. Multi-purpose interfaces comprise both an interface card and specific driver software for the interface card. The driver software can be designed so that it can replace the BIOS driver routines. Communication between the host device and the devices attached to the multi-purpose interface then essentially takes place by means of the specific driver software for the multi-purpose interface and no longer primarily by means of BIOS routines of the host device. Recently however drivers for multi-purpose interfaces can also already be integrated in the BIOS system of the host device as, alongside classical input/output interfaces, multi-purpose interfaces are becoming increasingly common in host devices. It is of course also possible to use BIOS routines in parallel with the specific driver software for the multi-purpose interface, if this is desired.

The interface device according to the present invention comprises a processor means, a memory means, a first connecting device for interfacing the host device with the interface device, and a second connecting device for interfacing the interface device with the data transmit/receive device. The interface device is configured by the processor means and the memory means in such a way that the interface device, when receiving an inquiry from the host device via the first connecting device as to the type of a device attached to the host device, sends a signal, regardless of the type of the data transmit/receive device, to the host device via the first connecting device which signals to the host device that it is communicating with an input/output device. The interface device according to the present invention therefore simulates, both in terms of hardware and software, the way in which a conventional input/output device functions, preferably that of a hard disk drive. As support for hard disks is implemented as standard in all commercially available host systems, the simulation of a hard disk, for example, can provide host device-independent use. The interface device according to the present invention therefore no longer communicates with the host device or computer by means of a specially designed driver but by means of a program which is present in the BIOS system (Basic Input/Output System) and is normally precisely matched to the specific computer system on which it is installed, or by means of a specific program for the multi-purpose interface. Consequently, the interface device according to the present invention combines the advantages of both groups. On the one hand, communication between the computer and the interface takes place by means of a host device-specific BIOS program or by means of a driver program which is matched to the multi-purpose interface and which could be regarded as a "device-specific driver". On the other hand, the BIOS program or a corresponding multi-purpose interface program which operates one of the common input/output interfaces in host systems is therefore present in all host systems so that the interface device according to the present invention is host device-independent.

In the following, preferred embodiments of the present invention will be explained in more detail with reference to the drawings enclosed, in which:

FIG. 1 shows a general block diagram of the interface device according to the present invention; and

FIG. 2 shows a detailed block diagram of an interface device according to a preferred embodiment of the present invention.

FIG. 1 shows a general block diagram of an interface device 10 according to the present invention. A first connecting device 12 of the interface device 10 can be attached to a host device (not shown) via a host line 11. The first connecting device is attached both to a digital signal processor 13 and to a memory means 14. The digital signal processor 13 and the memory means 14 are also attached to a second connecting device 15 by means of bi-directional communication lines (shown for all lines by means of two directional arrows). The second connecting device can be attached by means of an output line 16 to a data transmit/receive device which is to receive data from the host device or from which data is to be read, i.e. acquired, and transferred to the host device. The data transmit/receive device itself can also communicate actively with the host device via the first and second connecting device, as described in more detail in the following.

Communication between the host system or host device and the interface device is based on known standard access commands as supported by all known operating systems (e.g. DOS, Windows, Unix). Preferably, the interface device according to the present invention simulates a hard disk with

a root directory whose entries are "virtual" files which can be created for the most varied functions. When the host device system with which the interface device according to the present invention is connected is booted and a data transmit/receive device is also attached to the interface device 10, usual BIOS routines or multi-purpose interface programs issue an instruction, known by those skilled in the art as the INQUIRY instruction, to the input/output interfaces in the host device. The digital signal processor 13 receives this inquiry instruction via the first connecting device and generates a signal which is sent to the host device (not shown) again via the first connecting device 12 and the host line 11. This signal indicates to the host device that, for example, a hard disk drive is attached at the interface to which the INQUIRY instruction was sent. Optionally, the host device can send an instruction, known by those skilled in the art as "Test Unit Ready", to the interface device to request more precise details regarding the queried device.

Regardless of which data transmit/receive device at the output line 16 is attached to the second connecting device, the digital signal processor 13 informs the host device that it is communicating with a hard disk drive. If the host device receives the response that a drive is present, it then sends a request to the interface device 10 to read the boot sequence which, on actual hard disks, normally resides on the first sectors of the disk. The digital signal processor 13, whose operating system in stored in the memory means 14, responds to this instruction by sending to the host device a virtual boot sequence which, in the case of actual drives, includes the drive type, the starting position and the length of the file allocation table (FAT), the number of sectors, etc., known to those skilled in the art. Once the host device has received this data, it assumes that the interface device 10 according to a preferred embodiment of the present invention is a hard disk drive. In reply to an instruction from the host device to display the directory of the "virtual" hard disk drive simulated by the interface device 10 with respect to the host device, the digital signal processor can respond to the host device in exactly the same way as a conventional hard disk would, namely by reading on request the file allocation table or FAT on a sector specified in the boot sequence, normally the first writable sector, and transferring it to the host device, and subsequently by transferring the directory structure of the virtual hard disk. Further, it is possible that the FAT is not read until immediately prior to reading or storing the data of the "virtual" hard disk and not already at initialization.

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.

Preferably, the volume of data to be acquired by a data transmit/receive device is specified in a configuration file described in the following by the user specifying in the said configuration file that a measurement is to last, for example, five minutes. To the host device the "real-time input" file then appears as a file whose length corresponds to the anticipated volume of data in those five minutes. Those skilled in the art know that communication between a processor and a hard disk consists of the processor transferring to the hard disk the numbers of the blocks or clusters or sectors whose contents it wishes to read. By reference to the FAT the processor knows which information is contained in which block. In this case, communication between the host device and the interface device according to the present invention therefore consists of the very fast transfer of block numbers and preferably of block number ranges because a virtual "real-time input" file will not be fragmented. If the host device now wants to read the "real-time input" file, it transfers a range of block numbers to the interface device, whereupon data commences to be received via the second connecting device and data commences to be sent to the host device via the first connecting device.

In addition to the digital signal processor instruction memory, which comprises the operating system of the digital signal processor and can be implemented as an EPROM or EEPROM, the memory means 14 can have an additional buffer for purposes of synchronizing data transfer from the data transmit/receive device to the interface device 10 and data transfer from the interface device 10 to the host device.

Preferably, the buffer is implemented as a fast random access memory or RAM buffer.

Further, from the host device the user can also create a configuration file, whose entries automatically set and control various functions of the interface device 10, on the interface device 10 which appears to the host device as a hard disk. These settings can be, for example, gain, multiplex or sampling rate settings. By creating and editing a configuration file, normally a text file which is simple to understand with little prior knowledge, users of the interface device 10 are able to perform essentially identical operator actions for almost any data transmit/receive devices which can be attached to the second connecting device via the line 16, thus eliminating a source of error arising from users having to know many different command codes for different applications. In the case of the interface device 10 according to the present invention it is necessary for users to note the conventions of the configuration file once only in order to be able to use the interface device 10 as an interface between a host device and almost any data transmit/receive device.

As a result of the option of storing any files in agreed formats in the memory means 14 of the interface device 10, taking into account the maximum capacity of the memory means, any enhancements or even completely new functions of the interface device 10 can be quickly implemented. Even files executable by the host device, such as batch files or executable files (BAT or EXE files), and also help files can be implemented in the interface device, thus achieving independence of the interface device 10 from any additional software (with the exception of the BIOS routines) of the host device. On the one hand, this avoids licensing and/or registration problems and, on the other hand, installation of certain routines which can be frequently used, for example an FFT routine to examine acquired time-domain data in the frequency domain, is rendered unnecessary as the EXE files are already installed on the interface device 10 and appear in the virtual root directory, by means of which the host device can access all programs stored on the interface device 10.

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.

For persons skilled in the art it is however obvious that the interface device 10 is not necessarily signed on when the computer system is powered up but that a special BIOS routine or a driver for a multi-purpose interface can also be started on the host device during current operation of the computer system in order to sign on or mount the interface device 10 as an additional hard disk. This embodiment is suitable for larger workstation systems which are essentially never powered down as they perform, e.g. mail functions or monitor processes which run continuously, for example, in multi-tasking environments.

In the interface device according to the present invention an enormous advantage is to be gained, as apparent in the embodiment described in the following, in separating the actual hardware required to attach the interface device 10 to the data transmit/receive device from the communication unit, which is implemented by the digital signal processor 13, the memory means 14 and the first connecting device 12, as this allows a plurality of dissimilar device types to be operated in parallel in identical manner. Accordingly, many interface devices 10 can be connected to a host device which then sees many different "virtual" hard disks. In addition, any modification of the specific hardware symbolized by the second connecting device 15 can be implemented essentially without changing the operation of the interface device according to the present invention. Further, an experienced user can intervene at any time on any level of the existing second connecting device by making use of the above mentioned option of creating a configuration file or adding or storing new program sections for the second connecting device.

An important advantage of the interface device 10 of the present invention is that it also permits extremely high data transfer rates by using, for data interchange, the host device-own BIOS routines which are optimized for each host device by the host device manufacturer or BIOS system manufacturer, or by using driver programs which are normally optimized and included by the manufacturers of multi-purpose interfaces. Furthermore, due to the simulation of a virtual mass storage device, the data is managed and made available in such a way that it can be transferred directly to other storage media, e.g. to an actual hard disk of the host device without, as it were, intervention of the host device processor. The only limitation to long-term data transfer at high speed is therefore imposed exclusively by the speed and the size of the mass storage device of the host device. This is the case as the digital signal processor 13 already formats the data read by the data transmit/receive device via the second connecting device 15 into block sizes suitable for a hard disk of the host device, whereby the data transfer speed is limited only by the mechanical latency of the hard disk system of the host device. At this point, it should be noted that normally data flow from a host device must be formatted in blocks to permit writing to a hard disk and subsequent reading from a hard disk, as known by those skilled in the art.

The said data transfer rate can be increased further by setting up a direct memory access (DMA) or RAM drive in the host system. As those skilled in the art know, the setting up of a RAM drive requires processor resources of the host device, with the result that the advantage of writing the data to a hard disk drive of the host device essentially without the need for processor resources is lost.

As described above, a data buffer can be implemented in the memory means 14 to permit independence in terms of time of the data transmit/receive device attached to the second connecting device from the host device attached to the first connecting device. This guarantees error-free operation of the interface device 10 even for time-critical applications in multi-tasking host systems.

FIG. 2 shows a detailed block diagram of an interface device 10 according to the present invention.

A digital signal processor (DSP) 1300 is, in a manner of speaking, the heart of the interface device 10. The DSP can be any DSP but preferably has a 20-MB on-chip random access memory (RAM). Certain instruction sets, for example, can be stored in the RAM already integrated in the DSP. An 80-MHz clock generator is attached to the DSP 1300 in order to synchronize the DSP. The DSP implements a fast Fourier transformation (FFT) in real time and also optional data compression of the data to be transferred from the data transmit/receive device to the host device in order to achieve greater efficiency and to permit interoperation with host devices which have a smaller memory.

In the preferred embodiment of the interface device 10 shown in FIG. 2, the first connecting device 12 of FIG. 1 contains the following components: an SCSI interface 1220 and a 50-pin SCSI connector 1240 for attachment to an SCSI interface present on most host devices or laptops. The SCSI (small computer system interface) interface 1220 translates the data received via the SCSI connector 1240 into data understood by the DSP 1300, as known by those skilled in the art. Further, the first connecting device 12 comprises an EPP (enhanced parallel port) with a data transfer rate of approx. 1 MBps which delivers a more moderate data transfer rate of 1 MBps by comparison to the data transfer rate of 10 MBps of the SCSI interface. The EPP 1260 is connected to a 25-pin D-shell connector 1280 to permit attachment to a printer interface of a host device for example. Optionally, the first connecting device 12 also comprises a 25-pin connector 1282 which permits the attachment of 8 digital outputs and 8 digital inputs 1284 at a host device.

Preferably, the second connecting device comprises 8 BNC inputs with the calibration relay 1505, a block 1510 with 8 device amplifiers with an overvoltage protection of ±75 V, this block being connected in turn to 8 sample/hold (S&H) circuits 1515. The calibration relays are relays which permit controlled changeover between a test voltage and a calibration reference voltage. Each sample/hold circuit is connected to a corresponding input of an 8-channel multiplexer 1520 which feeds its output signals via a programmable amplifier 1525 into an analog/digital converter (ADC) with 12 bit and 1.25 MHz 1530 and to the DSP 1300. The ADC 1530 is controlled by means of a 20-bit timer 1535, as known by persons skilled in the art. The programmable amplifier 1525 and the 8-channel multiplexer 1520 are controlled via an amplifier channel selection circuit 1540 which is in turn controlled by the DSP 1300.

The complete interface device 10 is supplied with power by an external AC/DC converter 1800 which delivers a digital supply voltage of +5 V and is attached to a DC/DC

converter 1810 which can deliver analog supply voltages of ±5 V and ±15 V as required for the interface device 10. Further, the DC/DC converter controls a precision voltage reference 1820 which controls the 8 BNC inputs 1505 and the ADC 1530 as well as a digital/analog converter (DAC) 1830 which permits, via an output amplifier block with 4 output amplifiers 1840 and a 9-pin connector 1850, analog output direct from the DSP 1300 to an output device, e.g. printer device or monitor device, which can be attached via the 9-pin connector 1850, thus providing the option of monitoring the data transferred to the host device or also, for example, of viewing an FFT to obtain rapid and comprehensive data analysis without using processor time of the host device.

In FIG. 2 the memory means 14 of FIG. 1 is implemented by an EPROM 1400 which, in a preferred embodiment of the present invention, contains the operating system of the digital signal processor 1300. A random access memory with an access time of 15 ns and a size of 512 KB or optionally 1024 KB 1420 serves as a data buffer to achieve independence in terms of time of the output line 16 from the output lines 11*a*, 11*b* and 11*c* to the data transmit/receive device and to the host device respectively. As described above, in a preferred embodiment of the present invention the digital signal processor 1300 already contains a 20-KB on-chip RAM 1440 which can store certain instruction sets, functions and also smaller application software units.

The connection, symbolized by the line 16, of the interface device 10 to any data transmit/receive device implements, by means of the blocks 1505–1535, an analog input with a sampling rate of 1.25 MHz and quantization of 12 bits. There are 8 channels with an overvoltage protection of ±75 V. By means of the programmable amplifier 1525 the channels can be programmed independently of each other in voltage ranges up to a maximum of ±10 V. Unused channels can be grounded internally to reduce channel intermodulation. The block 1515 is implemented as a monolithic high-precision, high-speed sample/hold amplifier for simultaneous sampling of all channels. The precision voltage reference 1820 provides a high-precision, temperature-compensated monolithic energy gap voltage reference for auto-calibration of each channel and each gain. Further, offset fine adjustment for each channel is implemented by the same.

The blocks 1830, 1840 and 1850 implement a direct analog output for the digital signal processor 1300, and the DAC 1830 provides a data transfer rate of 625 kHz and a quantization of 12 bits. The block 1840 comprises 4 channels with a common output latch.

Further, the interface device 10 comprises a digital input/output device implemented by the blocks 1284 and 1282. Here there are 8 digital inputs, 8 digital outputs with a common latch, and the digital port can be attached preferably to a side panel of the interface device 10 so that the port itself can easily be accessed.

The digital signal processor 1300 provides on-board digital data processing. In particular, it is a high-performance DSP with a clock speed of 80 MHz and a 20-bit timer 1535.

As described above, the first connecting device 12 comprises the SCSI interface 1220 with a peak transfer rate of 10 MBps. An optional PCMCIA-to-SCSI adapter permits high-speed communication with laptop computers which are desirable and in widespread use, particularly by mobile service technicians. The EPP 1260 with its associated connector 1280 permits data transfer at a more moderate rate.

As described above, the interface device 10 is supplied with power by means of an external AC/DC adapter which has a universal power input (85–264 VAC, 47–63 Hz). Interference suppression complies with the standards EN 55022, curve B and FFC, Class B). Further, it is also in accordance with international safety regulations (TÜV, UL, CSA). The interface device 10 is externally shielded and achieves a value of 55 dB at 30–60 MHz and a value of approximately 40 dB at 1 GHz, and therefore complies with the MILSTD 285-1 standard.

As described above, communication between the host device and the multi-purpose interface can take place not only via drivers for input/output device customary in a host device which reside in the BIOS system of the host device but also via specific interface drivers which, in the case of SCSI interfaces, are known as multi-purpose interface ASPI (advanced SCSI programming interface) drivers. This ASPI driver, which can also be referred to as an ASPI manager, is specific to a special SCSI host adapter, i.e. to a special multi-purpose interface, and is normally included by the manufacturer of the multi-purpose interface. Generally speaking, this multi-purpose interface driver has the task of moving precisely specified SCSI commands from the host system program to the host system SCSI adapter. For this reason, the command set is almost identical to that of the SCSI interface itself. Essentially, only status and reset commands for the host adapter have been added.

The ASPI driver can be used if the hard disk was not already addressable at boot time or if the SCSI-related BIOS routines of the host computer were still disabled. Here too, the steps needed to initialize the interface device, preferably as a virtual hard disk, are similar to the steps taken when initializing at boot time.

In general terms, the ASPI manager comprises two sides. One side is the proprietary, hardware-oriented side. It is responsible for converting all commands into a form required by the corresponding multi-purpose interface. The hardware-oriented side of the ASPI driver is therefore matched to a very specific type of multi-purpose interface or SCSI interface. The other side is known as the user software side. This side is totally independent of the proprietary operating characteristics of the SCSI adapter and is therefore identical for all SCSI interfaces. This permits SCSI programming which is however independent of the individual SCSI adapter types.

In contrast to communication between the host device and the interface device according to the present invention on the basis of a BIOS driver, the use of such an ASPI driver for communication between the host device and the interface device according to the present invention allows various further possibilities of the SCSI multi-purpose interface to be exploited. In the case described above, the interface device which preferably signs on and behaves as a virtual hard disk is detected by the BIOS driver of the host computer at boot time and is configured as a hard disk. This step does not however support active requests sent by the interface device to the host computer. If however the virtual hard disk wishes to write data actively to, for example, a hard disk of the host computer or wishes to initiate communication with the processor of the host computer, the host computer must recognize the request of the virtual hard disk and tolerate a further issuer of instructions on its bus. If the interface device behaves solely like a virtual hard disk, it would always receive and never issue commands. The BIOS has no objections to an additional issuer of commands that actively wishes to place data on the bus of the host device but the BIOS does not support the host device in recognizing corresponding requests of the interface device or in granting the interface device permission to access the bus.

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. Thereupon, the interface device according to the present invention can write the desired data to the SCSI hard disk of the host computer totally independently of the host computer or can communicate with the same in some other manner. The interface device according to the present invention therefore initially behaves passively as a virtual hard disk and then, as required and using the driver software for the multi-purpose interface, actively on the same SCSI bus. This means however that the interface device according to the present invention, using a driver software for the multi-purpose interface which comprises the BIOS routines customary in host devices and simultaneously provides the option of active participation, can, regardless of the type of the data transmit/receive device attached to the second connecting device, behave initially as a virtual and at the same time passive hard disk but can, as required, participate actively on the bus so as to be able to initiate communication directly with other SCSI hard disks of the host device by bypassing the processor of the host device.

Using a standard interface of a host device, the interface device according to the present invention permits communication with any host device. By simulating an input/output device to the host device and, in a preferred embodiment, by simulating a virtual mass storage device, the interface device 10 is automatically supported by all known host systems without any additional sophisticated driver software. The simulation of a freely definable file structure on the "virtual" hard disk provides simple operation and expansion options and, through the implementation of any programs, independence from special software implemented on the host device. Help files included on the interface device 10 and plug-and-play support ensure ease of use even in portable, flexible host devices. Despite the very simple user interface, experienced users are free at any time to intervene in the functions of the interface device 10 on system level. The interface device 10 thus provides a universal solution which can cover the entire spectrum of possible data transmit/receive devices.

What is claimed is:

1. An interface device for communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device comprising the following features:

a processor;

a memory;

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

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

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

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

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.

3. An interface device in accordance with claim 2 wherein the configuration file is a text file.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

14. An interface device in accordance with claim 1 wherein the functions are gain, multiplex or synchronization settings of the second connecting device.

15. An interface device in accordance with claim 1 wherein the storage device is a hard disk.

16. 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.

17. An interface device for communication between a host device, which comprises a multi-purpose interface and a specific driver for this interface, and a data transmit/receive device comprising the following features:

a processor;

a memory;

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

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

where the interface device is configured using 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 at 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, whereupon the host device communicates with the interface device by means of the specific driver for the multi-purpose interface, and

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.

18. A method of communication between a host device, which comprises drivers for input/output devices customary in a host device and a multi-purpose interface, and a data transmit/receive device via an interface device comprising the following steps:

interfacing of the host device with a first connecting device of the interface device via the multi-purpose interface of the host device;

interfacing of the data transmit/receive device with a second connecting device of the interface device;

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;

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 in such a way that it is a storage device customary in a host device, whereupon the host device communicates with the interface device by means of the usual driver for the storage device, and

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.

* * * * *

EXHIBIT N

FILED
2007 JUN 28 PM 12:36
CLERK U.S. DISTRICT COURT
CENTRAL DIST. OF CALIF.
LOS ANGELES
BY

VENABLE LLP
Doug C. Emhoff, Esq. (SBN 151049)
demhoff@venable.com
Jeffrey M. Tanzer, Esq. (SBN 129437)
jtanzer@venable.com
2049 Century Park East, Suite 2100
Los Angeles, California 90067
Telephone: (310) 229-9900
Facsimile: (310) 229-9901

Attorneys for Plaintiff
PAPST LICENSING GmbH & Co. KG

VENABLE LLP
2049 CENTURY PARK EAST, SUITE 2100
LOS ANGELES, CALIFORNIA 90067

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

WESTERN DIVISION

PAPST LICENSING GmbH & Co. KG Plaintiffs, v. SAMSUNG TECHWIN CO., AND SAMSUNG OPTO-ELECTRONICS AMERICA, INC., Defendants.	CASE NO. *, CV 07 4249 PA (JCx) **COMPLAINT FOR PATENT INFRINGEMENT** **JURY TRIAL DEMANDED**

Plaintiff, Papst Licensing GmbH & Co. KG, by and through its attorneys, for its Complaint, alleges as follows:

Jurisdiction and Venue

1. This is an action for patent infringement arising under the patent laws of the United States, Title 35, United States Code. Jurisdiction is proper pursuant to 28 U.S.C. §§ 1331 and 1338.

2. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400.

///

EXHIBIT F

The Parties

3. Papst Licensing GmbH & Co. KG ("Papst Licensing") is a company duly organized and existing under the laws of The Federal Republic of Germany with its principal place of business headquartered at Bahnofstrasse 33, 78112 St. Georgen, Germany.

4. Upon information and belief, Samsung Techwin Co. ("Samsung Techwin") is a foreign for-profit corporation organized and existing under the laws of Korea, and is located at 647-9, Yeoksam-Dong, Kangnam-gu, Seoul, 135, 080, Korea. Upon information and belief, Samsung Techwin is the parent corporation of and carries out its business in the United States through its subsidiary, Samsung Opto-Electronics America, Inc. ("Samsung America"), a corporation duly organized under the laws of New Jersey, having a principal place of business located at 18600 Broadwick St., Rancho Dominguez, California 90220. Hereinafter Samsung Techwin and Samsung America will be referred to collectively as "the Samsung Defendants."

5. The Samsung Defendants are in the business of designing, marketing and selling digital cameras, including the products at issue in this litigation.

Count 1—Patent Infringement (U.S. Patent No. 6,470,399)

6. The allegations contained in paragraphs 1 through 5 are incorporated by this reference as though fully set forth herein.

7. On October 22, 2002, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,470,399 ("the '399 patent") with Michael Tasler as the inventor.

8. Papst Licensing owns all right, title and interest in and to the '399 patent and has not assigned or transferred these rights to anyone at any time.

9. Upon information and belief, the Samsung Defendants have directly infringed and continue to infringe the '399 patent by making, using, offering to sell or selling within the United States and/or importing into the United States, including in this judicial district, digital cameras covered by the claims of the '399 patent.

VENABLE LLP
2049 CENTURY PARK EAST, SUITE 2100
LOS ANGELES, CALIFORNIA

10. Upon information and belief, the Samsung Defendants have actively induced others and/or contributed to the infringement of the '399 patent.

11. Papst Licensing has notified the Samsung Defendants of Papst Licensing's ownership of the '399 patent and the potential claim of infringement against the Samsung Defendants. Despite this notice, the Samsung Defendants have continued to infringe and, upon information and belief, will continue to infringe the '399 patent until enjoined by this Court.

12. The Samsung Defendants' infringement of the '399 patent is willful, intentional and constitutes an exceptional case under 35 U.S.C. § 285.

13. As a result of the Samsung Defendants' infringement of the '399 patent, Papst Licensing has suffered and continues to suffer damages in an amount to be proven at trial and other injuries not capable of compensation through the payment of money damages.

Count 2—Patent Infringement (U.S. Patent No. 6,470,449)

14. The allegations contained in paragraphs 1 through 13 are incorporated by this reference as though fully set forth herein.

15. On May 17, 2005, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,895,449 ("the '449 patent") with Michael Tasler as the inventor.

16. Papst Licensing owns all right, title and interest in and to the '449 patent and has not assigned or transferred these rights to anyone at any time.

17. Upon information and belief, the Samsung Defendants have directly infringed and continue to infringe the '449 patent by making, using, offering to sell or selling within the United States and/or importing into the United States, including in this judicial district, digital cameras covered by the claims of the '449 patent.

18. Upon information and belief, the Samsung Defendants have actively induced others and/or contributed to the infringement of the '449 patent.

19. Papst Licensing has notified the Samsung Defendants of Papst Licensing's

VENABLE LLP
2049 CENTURY PARK EAST, SUITE 2100
LOS ANGELES, CALIFORNIA

ownership of the '449 patent and the potential claim of infringement against the Samsung Defendants. Despite this notice, the Samsung Defendants have continued to infringe and, upon information and belief, will continue to infringe the '449 patent until enjoined by this Court.

20. The Samsung Defendants' infringement of the '449 patent is willful, intentional and constitutes an exceptional case under 35 U.S.C. § 285.

21. As a result of the Samsung Defendants' infringement of the '449 patent, Papst Licensing has suffered and continues to suffer damages in an amount to be proven at trial and other injuries not capable of compensation through the payment of money damages.

WHEREFORE, Papst Licensing respectfully requests that this Court enter judgment in its favor and against the Samsung Defendants on all counts of the complaint and award Papst Licensing the following relief:

a. compensatory damages in an amount to be determined at trial;

b. increased damages in an amount equal to three times the amount of compensatory damages found or assessed;

c. reimbursement for reasonable attorney's fees and costs;

d. pre-judgment and post-judgment interest on the damages and costs awarded, including pre-judgment and post-judgment interest on any enhanced damages, attorneys' fees and costs awarded;

e. preliminary and permanent injunctive relief prohibiting any further infringement by the Samsung Defendants and all of their officers, agents, servants, employees and attorneys and all those persons in active concert or participation with them who receive actual notice of the order by personal service or otherwise; and

f. such other relief, award or remedy, legal or equitable, as this Court deems proper.

VENABLE LLP
2049 CENTURY PARK EAST, SUITE 2100
LOS ANGELES, CALIFORNIA

Jury Demand

Papst Licensing demands a trial by jury for all claims and issues so triable.

DATED: June 28, 2007

VENABLE LLP
Doug C. Emhoff
Jeffrey M. Tanzer

By: _____
Attorneys for Plaintiff
PAPST LICENSING GmbH & Co. KG

VENABLE LLP
2049 CENTURY PARK EAST, SUITE 2100
LOS ANGELES, CALIFORNIA

UNITED STATES OF AMERICA
JUDICIAL PANEL ON MULTIDISTRICT LITIGATION

In Re Papst Licensing, GmbH,
PATENT LITIGATION

This document relates to Civil Action Nos. 06 CV 1751 (Casio), 07 CV 1118 (Fuji DC), 07 CV 3401 (Fuji NDIL), 07 CV 415 (Olympus), 07 CV 4249 (Samsung)

MDL No. _____

CORPORATE DISCLOSURE STATEMENT OF PAPST LICENSING GmbH & CO. KG

Pursuant to Rule 5.3 of the Rules of Procedure of the Judicial Panel on Multidistrict Litigation, Papst Licensing GmbH & Co. KG discloses that it has no parent corporations and that there are no publicly held companies that own 10% of more of Papst Licensing GmbH & Co. KG's stock.

Dated: July 9, 2007

PAPST LICENSING GmbH & CO. KG

Campbell Killefer

Campbell Killefer (D.C. Bar No. 468433)
VENABLE LLP
575 7th Street, N.W.
Washington, D.C. 20004
(202) 344-4000 (phone)
(202) 344-8300 (fax)
ckillefer@venable.com (email)

Jerold B. Schnayer, Esq.
WELSH & KATZ, LTD.
120 S. Riverside Plaza, 22nd Floor
Chicago, Illinois 60606
(312) 655-1500 (phone)
(312) 655-1501 (fax)
jbsdocket@welshkatz.com (e-mail)

Attorneys for Papst Licensing GmbH & Co. KG

CERTIFICATION OF SERVICE

The undersigned hereby certified that a true and correct copy of the CORPORATE DISCLOSURE STATEMENT OF PAPST LICENSING GmbH & CO. KG was served via First Class U.S. Mail, on this 9th day of July, 2007, in accordance with the attached Service List.

Campbell Killefer

Campbell Killefer

WELSH & KATZ, LTD.

Attorneys at Law

120 SOUTH RIVERSIDE PLAZA - 22ND FLOOR
CHICAGO, ILLINOIS 60606-3912

TELEPHONE (312) 655-1500
FACSIMILE (312) 655-1501

www.welshkatz.com

A. SIDNEY KATZ*
RICHARD L. WOOD*
JEROLD B. SCHNAYER
JOSEPH R. MARCUS
GERALD S. SCHUR
GERALD T. SHEKLETON
JAMES A. SCHEER
DANIEL R. CHERRY
ROBERT B. BREISBLATT
JAMES P. WHITE
HARTWELL P. MORSE, III
EDWARD P. GAMSON, PH.D.
KATHLEEN A. RHEINTGEN
THOMAS W. TOLPIN*
RICHARD W. McLAREN, JR.
ELLIOTT C. BANKENDORF
JOHN L. AMBROGI
JULIE A. KATZ
WALTER J. KAWULA, JR.
STEVEN E. FELDMAN
JON P. CHRISTENSEN
LEONARD FRIEDMAN
JEFFREY W. SALMON
LOUISE T. WALSH
PAUL M. VARGO, PH.D.
JOSEPH E. CWIK
J. ARON CARNAHAN
ERIK B. FLOM, PH.D.

JAMES B. RADEN
RICHARD J. GURAK
DANIEL M. GURFINKEL
MICHELE S. KATZ*
JOSEPH F. SCHMIOT

BRIAN J. SODIKOFF
BRETT M. TOLPIN
GEORGE S. PAVLIK
MICHAEL A. KROL, PH.D.
CRAIG M. KUCHII
STEPHEN P. BENSON
GREGORY J. SKONY
MyLYNDA J. MOORE
AMY L. HAMMER
GREGORY J. LEIGHTON
DENNIS C. LEE

OF COUNSEL
LAURIE A. HAYNIE
PHILIP D. SEGREST, JR.**
WALLACE L. OLIVER, PH.D.
LAURA A. LABEOTS, PH.D.

DONALD L. WELSH (1925-1998)

* ALSO ADMITTED IN DISTRICT OF COLUMBIA
** ALSO ADMITTED IN ALABAMA

July 11, 2007

Via Overnight Courier
(See enclosed Service List)

Re: In re Papst Digital Camera Patent Litigation

Dear Clerks and Counsels:

Enclosed is a Schedule of Actions and a Revised Proof of Service certificate that was submitted to the Panel today in the above-identified litigation.

Very truly yours,

WELSH & KATZ, LTD.

Michele S. Katz

Enclosures

WASHINGTON OFFICE
CRYSTAL PLAZA ONE - SUITE 311 - 2001 JEFFERSON DAVIS HIGHWAY - ARLINGTON, VIRGINIA 22202-3503 - TELEPHONE (703) 415-4777

REVISED PROOF OF SERVICE

I certify that I caused a true and correct copy of Motion For Transfer of Action to Single District For consolidation and Coordinated Pre-Trial Proceedings to be served via Overnight Courier, on the following parties pursuant to JPML Rule 5.2(a):

Counsel For Casio, Inc.
Jeffrey M. Gold
Morgan Lewis & Bockius
101 Park Avenue
New York, NY 10178

J. Kevin Fee
Morgan Lewis & Bockius
1111 Pennsylvania Avenue, NW.
Washington, DC 20004

Scott D. Stimpson
The Law Office of Scott D. Stimpson
445 Hamilton Avenue, 11th Floor
White Plains, NY 10601

Counsel For Fujifilm Corporation
Brent A. Hawkins
Matthew J. Gryzlo
McDermott Will & Emery LLP
227 W. Monroe Street
Suite 4400
Chicago, IL 60606

Steven J. Routh
Sten A. Jensen
Hogan & Hartson LLP
555 Thirteenth Street, NW
Washington, DC 20004

William H. Wright
Robert J. Benson
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067

John R. Inge
Shinjuku Center Building
46th Floor
25-1 Nishi-Shinjuku 1-Chome
Shinjuku-ku Tokyo, 163-0646
Japan

Counsel For Fujifilm USA
Brent A. Hawkins
Matthew J. Gryzlo
McDermott Will & Emery LLP
227 W. Monroe Street
Suite 4400
Chicago, IL 60606

Steven J. Routh
Sten A. Jensen
Hogan & Hartson LLP
555 Thirteenth Street, NW
Washington, DC 20004

William H. Wright
Robert J. Benson
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067

John R. Inge
Shinjuku Center Building
46th Floor
25-1 Nishi-Shinjuku 1-Chome
Shinjuku-ku Tokyo, 163-0646
Japan

Counsel For Olympus Corporation,
Phillippe Y. Riesen
Hogan & Hartson
Gaikokuho Jimu Bengoshi Jimusho
Shinjuku Center Building, 46th Floor
25-1 Nishi-Shinjuku 1-chome, Shinjuku-ku
163-0646 Tokyo, Japan

Counsel For Olympus Imaging America, Inc.
Phillippe Y. Riesen
Hogan & Hartson
Gaikokuho Jimu Bengoshi Jimusho

Shinjuku Center Building, 46th Floor
25-1 Nishi-Shinjuku 1-chome, Shinjuku-ku
163-0646 Tokyo, Japan

Counsel For Samsung Techwin Co.
Brian C. Rupp
Drinker Biddle
191 N. Wacker Drive
Suite 3700
Chicago, IL 60606

Counsel For Samsung Opto-Electronics American, Inc.
Brian C. Rupp
Drinker Biddle
191 N. Wacker Drive
Suite 3700
Chicago, IL 60606

and on the following clerks of each district court in which an action is pending, pursuant JPML Rule 5.2(b):

Northern District of Illinois
Michael W. Dobbins
Clerk of Court
Everett McKinley Dirksen Building
219 South Dearborn Street
Chicago, Illinois 60604

District of Delaware
Peter T. Dalleo
Clerk of Court
U.S. District Court
844 N. King Street
Lockbox 18
Wilmington, DE 19801

District of Columbia
Nancy Mayer-Whittington
Clerk's Office
United States District Court
For the District of Columbia
333 Constitution Avenue, N.W.
Washington, D.C. 20001
(202) 354 - 3000

Central District of California
Sherri R. Carter
Clerk of Court
312 North Spring Street, Room G-8
Los Angeles, CA 90012

Done this 11th day of July, 2007.

Campbell Killefer
Campbell Killefer

EXHIBIT O

BEFORE THE JUDICIAL PANEL ON MULTIDISTRICT LITIGATION

In re Papst Licensing Digital Camera Patent Litigation	))	MDL - _____

MOTION FOR TRANSFER OF ACTION TO SINGLE DISTRICT FOR CONSOLIDATED AND COORDINATED PRE-TRIAL PROCEEDINGS

1. ***Relief Sought.*** Papst Licensing GmbH & Co. KG ("Papst") seeks to have all of the following actions transferred for consolidated and coordinated pre-trial proceedings as permitted by Section 1407(a) of Title 28 of the United States Code. Papst respectfully requests Oral Argument on this motion.

2. ***Schedule of Cases Requested to Be Transferred:***

District of Columbia
Casio, Inc. v. Papst Licensing GmbH & Co. KG, Case Action No. 1:06cv1751, Judge Kessler.

District of Columbia
Fujifilm Corporation, Fujifilm U.S.A., Inc. v. Papst Licensing GmbH & Co. KG; Case No. 1:07cv01118, Judge Kessler.

Northern District of Illinois
Papst Licensing GmbH & Co. KG v. Fujifilm Corporation, Fujifilm U.S.A., Inc., Case No. 07cv3401, Judge Holderman.

Central District of California, Western Division
Papst Licensing GmbH & Co. KG v. Samsung Techwin Co., Samsung Opto-Electronics American, Inc.; Civil Action No. 07cv4249, Judge Anderson Assigned.

District of Delaware
Papst Licensing GmbH & Co. KG v. Olympus Corporation, Olympus Imaging America, Inc., Civil Action No. 07cv0415, Vacant Judgeship.

BEFORE THE JUDICIAL PANEL ON MULTIDISTRICT LITIGATION

In re Papst Digital Camera Patent Litigation) MDL - _____
)

MEMORANDUM IN SUPPORT OF MOTION FOR TRANSFER OF ACTION TO SINGLE DISTRICT FOR CONSOLIDATED AND COORDINATED PRE-TRIAL PROCEEDINGS

Papst Licensing GmbH & Co. KG ("Papst") respectfully requests that the Judicial Panel on Multidistrict Litigation (the "Panel") transfer the five actions identified below to a single district for consolidated and coordinated pre-trial proceedings for the reasons set forth in this memorandum. All of these five actions concern infringement of the same two United States patents based on the sale of the same type of products, digital cameras. Under these circumstances, the Panel routinely consolidates the actions for pretrial discovery. *E.g.*, *In re Mirtazapine Patent Litig.*, 199 F.Supp. 2d 1380 (J.P.M.L. 2004); *In re Buspirone Patent Litig.*, 185 F.Supp.2d 363 (J.P.M.L. 2001); *In re Metoprolol Succinate Patent Litig.*, 329 F.Supp.2d 1368 (J.P.M.L. 2004); *In re Nabumetone Patent Litig.*, 1998 U.S. Dist. LEXIS 13735 (J.P.M.L. 1998); *In re Gabapentin Patent Litig.*, 2001 U.S. Dist. LEXIS 1726 (J.P.M.L. 2001); *In re Sundstrand Data Control, Inc. Patent Litig.*, 443 F. Supp. 1019 (J.P.M.L. 1978).

FACTS

1. The following five lawsuits in four different judicial districts all concern the infringement of U.S. Patent No. 6,470,399 and U.S. Patent No. 6,895,449 (the "Tasler Patents") by digital cameras:

a. *Casio, Inc. v. Papst Licensing GmbH & Co.*, C.A. No. 1:06-cv-01751 pending in the District of Columbia;

b. *Papst Licensing GmbH & Co. KG v. Fuji Corporation and Fujifilm USA, Inc.*, C. A. No. 07 cv 3401 pending in the Northern District of Illinois;

c. *Fuji Corporation and FujiFilm USA, Inc. v. Papst Licensing GmbH & Co. KG*, C.A. No. 07 cv 1118, pending in the District of Columbia;

d. *Papst Licensing GmbH & Co. KG v. Olympus Corporation and Olympus Imaging America, Inc.*, C. A. No. 07 cv 1751 pending in the District of Delaware; and

e. *Papst Licensing GmbH & Co. KB v. Samsung Techwin Co. and Samsung Opto-Electronics America, Inc.*, C. A. No. 07 cv 4249 pending in the Central District of California.

2. Digital cameras are popular electronic devices used to capture and store photographs electronically in digital format, instead of using photographic film like conventional cameras.

3. All five actions primarily concern allegations by Papst of infringement of both Tasler Patents based on the manufacture and sale of digital cameras. All five pending actions involve or will involve the same defenses of non-infringement and challenges to the validity of both Tasler Patents.[1]

4. Michael Tasler is the sole inventor of the Tasler Patents. Mr. Tasler is a German national who resides in Germany.

5. Papst, the owner of both Tasler Patents, is a company based in Germany. Papst is the one party common to all five actions, either as a plaintiff or as a declaratory judgment defendant.

---

[1] Because the actions filed by Papst were recently filed, the respective defendants in those cases have not yet answered the complaints, but it can be safely assumed that those defendants will respond with defenses of non-infringement and claims that the Camera Patents are invalid.

6. On October 16, 2006, Casio Inc. filed an action for declaratory judgment in the District Court for the District of Columbia, naming Papst as a declaratory judgment defendant. The lawsuit is captioned *Casio, Inc., v. Papst Licensing GmbH & Co. KG*, Civil Action No. 1:06CV01751 (the "Casio DJ Action"). **Ex. A.** In its complaint, Casio, Inc. seeks a declaration that both Tasler Patents are invalid, and that Casio, Inc.'s digital cameras do not infringe both Tasler Patents. On March 13, 2007, Papst Licensing filed a counterclaim in this action against both Casio, Inc. and Casio Computer Co., Ltd. asserting both companies infringe both Tasler Patents by their manufacture and/or sale of digital cameras. Casio Computer Co., Ltd. is a headquartered in Japan and Casio, Inc. is its related company based in the United States.

7. The parties in the Casio DJ Action are conducting written discovery. No depositions have been taken in the Casio DJ Action.

8. On June 15, 2007, Papst filed a lawsuit in the District Court for the Northern District of Illinois against Fujifilm Corporation and Fujifilm U.S.A., Inc. (collectively "Fujifilm") asserting both companies infringe the two Tasler Patents based on their manufacture and/or sale of digital cameras. Fujifilm Corporation is a Japanese company, and Fujifilm U.S.A., Inc. is its related company based in the United States. This lawsuit is captioned *Papst Licensing GmbH & Co. KG v. Fujifilm Corporation, Fujifilm U.S.A., Inc.*, 07CV3401 (the "Fujifilm Action"). **Ex. B.** Neither Fujifilm company has filed an answer.

9. On June 21, 2007, Fujifilm filed a declaratory judgment action in the United States District for the District of Columbia. That lawsuit is captioned *Fujifilm Corporation and Fujifilm U.S.A., Inc. v. Papst Licensing GmbH & Co. KG*, C. A. No. 07CV3401 (the "Fujifilm DJ Action"). **Ex. D.** In the Fujifilm DJ Action, Fujifilm seeks a declaration that both Tasler Patents are invalid and that the Fujifilm digital cameras do not infringe the two Tasler Patents. Papst has not yet filed

an answer in the Fujifilm DJ Action. The Fujifilm defendants simultaneously moved to dismiss the Fujifilm Action or in the alternative to transfer the case to the District of Columbia where Fujifilm filed the Declaratory Judgment Action. **Ex. C.** In its motion, Fujifilm admits that the Casio Action and the Fujifilm Action "seek[ ] adjudication of the same issues of law and fact." Ex. C, p. 5. Papst opposes dismissal and/or transfer, and a hearing on the motion to dismiss is scheduled for July 10, 2007. No discovery has occurred in this action.

10. No discovery has occurred in the Fujifilm Action or the Fujifilm DJ Action.

11. On June 28, 2007, Papst filed a lawsuit in the District Court for the District of Delaware against Olympus Corporation and Olympus Imaging America, Inc. (collectively "Olympus"). Olympus is based in Japan, and Olympus Imaging America, Inc. is the Olympus-related company based in the United States. This lawsuit is captioned *Papst Licensing GmbH & Co. KG v. Olympus Corporation, Olympus Imaging America, Inc.*, C. A. No. 07CV1751 (the "Olympus Action"). **Ex. E.** In the lawsuit Papst asserts both companies infringe the two Tasler Patents by their manufacture and/or sales of digital cameras. Neither Olympus party has filed an answer in the Olympus Action, nor has no discovery occurred.

12. No discovery has occurred in the Olympus Action.

13. On June 28, 2007, Papst Licensing filed a lawsuit in the District Court for the Central District of California, Western Division against Samsung Techwin Co. and Samsung Opto-Electronics America, Inc. (collectively "Samsung") for infringement of the Tasler Patents. Samsung Techwin Co. is a South Korean based company, and Samsung Opto-Electronics America, Inc. is its related company based in the United States. This lawsuit is captioned *Papst Licensing GmbH & Co. KG v. Samsung Techwin Co., Samsung Opto-Electronics America, Inc.*, C.A. No. 4249 (the "Samsung Action"). **Ex. F.** In the lawsuit Papst asserts both companies infringe the two Tasler

Patents by their manufacture and/or sales of digital cameras. Neither Samsung party has filed an answer in the Samsung Action, nor has no discovery occurred.

14. No discovery has occurred in the Samsung Action.

15. The inventions in the Tasler Patents relate to an interface device for communication between a host device and, for example, a device from which data is to be acquired. ('399 patent, column 1, lines 10-12). The "devices from which data are to be acquired cover the entire electrical engineering spectrum." ('399 patent, column 1, lines 35-46). In accordance with the Tasler Patents, a host device such as a personal computer is able to recognize how to communicate with and receive data from a peripheral device without a user having to load any software at all onto the host device. To do this, an interface device automatically and without user intervention sends a response signal to a personal computer during the process by which the computer initially recognizes how it can communicate with and receive data from the interface device. After this automatic recognition process is completed, digitized analog data may be transferred to the host device at relatively high speed.

16. The digital cameras at issue are data acquiring devices that have built into the camera an interface capable of communicating with a host device such as a personal computer, for example, in "USB Mass Storage Mode."[2] In USB Mass Storage Mode, the interfaces of the digital cameras send response signals to the personal computer in a way that makes the computer recognize the digital camera as a disk drive. The personal computer then communicates with the digital camera using protocols created for disk drives. Thus, the interfaces in the digital cameras at issue take advantage of the protocols normally present on personal computers, and do not require the camera

[2] There are also issues of infringement relating to additional modes of operation of the digital cameras and other data acquisition devices.

user to install software specifically designed for digital cameras. This greatly enhances the convenience and ease of use of the digital cameras.

ARGUMENT

I. *CONSOLIDATION SHOULD BE ORDERED BECAUSE THE ISSUES OF FACT CONCERNING INFRINGEMENT AND VALIDITY ARE COMMON TO EACH ACTION.*

"When civil actions involving one or more common questions of fact are pending in different districts, such actions may be transferred to any district for coordinated or consolidated pre-trial proceedings." 28 U.S.C. §1407. This case involves common questions of fact pending in four judicial districts. Consolidation will advance the interests of justice by avoiding duplicative discovery and inconsistent results, by providing greater efficiency to pretrial discovery, and by avoiding the wasteful duplication of judicial efforts.

Papst's Tasler Patents are common to all of the actions now pending in the five different districts. The infringement of the Tasler Patents and the validity of the Tasler Patents are factual issues common to all four actions. Under such circumstances, the Panel routinely orders consolidation. E.g., *In re Mirtazapine Patent Litig.*, 199 F.Supp. 2d 1380 (J.P.M.L. 2004) (involving the consolidation of six patent infringement lawsuits); *In re Buspirone Patent Litig.*, 185 F.Supp.2d 363 (J.P.M.L. 2001) (involving the consolidation of four patent infringement and twenty-two antitrust actions); *In re Metoprolol Succinate Patent Litig.*, 329 F.Supp.2d 1368 (J.P.M.L. 2004) (consolidating four separate actions); *In re Nabumetone Patent Litig.*, 1998 U.S. Dist. LEXIS 13735 (J.P.M.L. 1998) (consolidating four separate actions); *In re Gabapentin Patent Litig.*, 2001 U.S. Dist. LEXIS 1726 (J.P.M.L. 2001) (consolidating four separate actions); *In re Sundstrand Data Control, Inc. Patent Litig.*, 443 F. Supp. 1019 (J.P.M.L. 1978) (involving the consolidation of five actions pending in four districts).

A. The Infringement Of The Tasler Patents Presents Common Issues Of Fact Warranting Consolidation.

Casio and Fujifilm have alleged that making, using, selling or offering for sale their respective digital cameras do not infringe the Tasler Patents. It is believed that Olympus and Samsung will also allege that their products do not infringe the Tasler Patents. As set forth above, the digital cameras at issue are capable of operating in "USB Mass Storage Mode," which makes the camera appear to be a disk drive. A common issue across all of the cases, therefore, is whether camera operations in USB Mass Storage Mode infringe the patents in each suit. In this regard, whether a Casio digital camera infringes the Tasler Patents, as raised by Casio in the Casio DJ Action, will present the same issues of fact as whether Fujifilm digital cameras infringe the same patents (in the Fujifilm Action and Fujifilm DJ Action), or Olympus digital cameras (in the Olympus Action) or Samsung digital cameras (in the Samsung Action). Such commonality of issues warrants transfer and consolidation for pretrial proceedings. *See In re Western Electric Co. Semiconductor Patent Litig.*, 415 F. Supp. 378, 381 (J.P.M.L. 1976) (common questions of patent infringement would receive same benefit from consolidation as common questions of patent validity).

B. The Validity Of The Tasler Patents Presents Common Issues Of Fact Warranting Consolidation.

Another reason for consolidating the Camera Patent cases is that they involve common facts regarding the validity of the patents. In *In re Joseph F. Smith Patent Litig.*, for example, plaintiff Smith instituted six patent infringement actions against six separate defendants in three districts. 407 F. Supp. 1403 (J.P.M.L. 1976). The Panel granted Smith's motion to transfer all six actions to one district for coordinated or consolidated pretrial proceedings because each action shared common questions of fact with respect to the validity of Smith's patent. *Id.* at 1404. Similarly, In *In re the Triax Company Patent Litig.*, plaintiff Triax commenced three patent infringement actions against three separate defendants in two districts. 385 F. Supp. 590, 591 (J.P.M.L. 1974). The Panel granted

Triax's motion for an order transferring one action to the district where two others were because of the common pretrial questions regarding validity:

> An examination of the pleadings in this litigation reveals that, despite the unique infringement issues, **significant common factual questions are raised regarding the validity of these patents.** If pretrial proceedings in each action are neither coordinated nor consolidated, inconsistent pretrial rulings and unnecessary duplication of discovery might result.

Id. at 591 (emphasis added); *see also*, *In re Amoxicillin Patent and Antitrust Litigation*, 449 F. Supp. 601, 603 (J.P.M.L. 1978) (Panel granting motion to transfer three patent infringement actions in three districts due to complex factual questions regarding patent validity and misuse and the strong likelihood that discovery concerning these questions would be both complicated and time-consuming); *In re Western Electric Co. Semiconductor Patent Litig.*, 415 F. Supp. 378, 380 (J.P.M.L. 1976) (Panel consolidating five patent actions because "common factual questions on the validity issue alone necessitate centralized pretrial processing in order to ensure that the possibilities of duplicative discovery and inconsistent pretrial rulings are avoided"); *In re Molinaro/Catanzaro Patent Litig.*, 380 F. Supp. 794, 795 (J.P.M.L. 1974) ("the key issue in each of these actions is whether plaintiff's patent can withstand defendants' charges of invalidity. And that issue raises complex questions of fact common to each action . . .").

So far, Casio and Fujifilm have alleged and seek a declaratory judgment that the Tasler Patents are invalid and/or not infringed. Samsung and Olympus are sure to follow, as these are routine defenses to allegations of patent infringement. It is expected that each action will raise common issues such as the scope and content of the prior art, the dates of conception and reduction to practice of the invention, and other facts relating to validity. Thus, there will be considerable overlap of issues and of discovery.

C. Discovery Has Not Commenced, Or Is In Early Stages, In The Currently-Pending Actions.

The state of discovery in the pending actions is similar to the circumstances of *In re Panty Hose Seaming Patent Litig.*, 402 F. Supp. 1401, 1402 (J.P.M.L. 1975). In that case, the trial of the validity issue was not imminent in any of the actions, that no discovery on the issue of validity had occurred in three of the actions, and that only minimal discovery had occurred on the validity issue in the fourth action. *Id.* at 1403. Under those circumstances, the Panel ruled that four patent actions shared common questions of fact and transferred three actions to be consolidated with the fourth action. The Panel there found that such a transfer would best serve the convenience of the parties and witnesses and promote the just and efficient conduct of the litigation. *Id.* at 1402.

In these five patent infringement cases, like in *In re Panty Hose Seaming Patent Litig.*, only the Casio case has proceeded into the initial stages of discovery (documents and interrogatory answers). No depositions have occurred. In each of the other lawsuits, the parties have not even begun discovery. At this early stage, judicial economy will best be achieved by consolidating the five actions and transferring them to one district court that will administer and manage these similar cases most economically and consistently.

D. Unnecessary Duplication of Discovery Would Be Particularly Burdensome Because Witnesses And Parties Are Located Overseas.

In connection with the common infringement and validity issues, it is assumed that each of the camera makers in the five actions seek oral testimony from the inventor, Mr. Tasler. As set forth above, Mr. Tasler a native of and a resident of Germany. Whether Mr. Tasler testifies in the U.S. or in Germany, the taking of the testimony will involve either the witness or counsel to engage in overseas travel. Additionally, the camera makers may seek to take the testimony of other witnesses who reside in Germany. The German witnesses should not be forced to appear time and time again, as one party after another notices depositions.

Additionally, each of the camera maker parties has substantial operations overseas. Casio Computer Co., Fujifilm Corp., and Olympus Corp. all operate out of Japan, and Samsung Techwin Co. operates out of South Korea. It is very likely that discovery of these companies will require overseas travel.

The best way to ensure that discovery of overseas witnesses is not unnecessarily duplicated is to consolidate the cases for pretrial proceedings. *See In re Molinaro/Catanzaro Patent Litig.*, 380 F. Supp. 794, 795 (J.P.M.L. 1974) ("A Section 1407 transfer of all actions to a single district for coordinated or consolidated pretrial proceedings will insure that that discovery is not duplicated and avoid unnecessary inconvenience to the plaintiffs and their witnesses."). One court can manage discovery of these overseas witnesses and entities, and ensure that there is no unnecessary duplication of efforts and travel.

In summary, the Panel should order consolidation of these five actions to one common district for pretrial proceedings because of the common issues regarding infringement and validity.

II. THE MULTIPLE ACTIONS INVOLVING THE TASLER PATENTS SHOULD BE CONSOLIDATED TO CONSERVE JUDICIAL RESOURCES

The five actions identified above involve the same two patents and most likely will involve common pretrial discovery and motion practice. For example, issues of law that would have to be addressed by each of the four district courts in the absence of consolidation includes the extent to which privilege attaches to attorney-client communications involving attorneys and clients in Germany and the scope of protective orders to protect each party's confidential information.

Regarding the issue of attorney-client privilege, the initial priority document for the Tasler Patents is a patent application filed in Germany in March, 1997. There are written communications between the inventor of the Tasler Patents, Mr. Michael Tasler, and his patent attorney in Germany. The issue of the scope of privilege attaching to these attorney-client communications often requires

the district court to weigh competing testimony concerning the law and privileges in Germany. E.g., *In re Rivastigmine Patent Litig.*, 237 F.R.D. 69, 74 (S.D.N.Y. 2006) ("In a patent matter involving clients, attorneys, and patent applications of diverse nations, the law of multiple countries may be involved."); *Astra Akiebolag v. Andrx Pharmaceuticals, Inc.*, 208 F.R.D. 92, 97 (S.D.N.Y. 2002) ("Most, if not all, of the challenged documents are foreign documents; therefore, determination of the applicability of attorney-client privilege or work product protection to many challenged documents implicates issues of foreign law."). It would be best for a single district court to rule on privilege issues so that Papst is not subject to contradictory rulings concerning what it should produce, and what is properly withheld on grounds of privilege.

Another issue of law that is likely to be common amongst the five actions will be the scope and content of protective orders. A designation of "Confidential" by one of the digital camera makers should mean the same thing across all of the litigations, and should not subject Papst to different protective orders having different governing rules and definitions of who may view confidential information. It would be serve the interests of judicial economy for one court, rather than four, to address these issues. Consolidation is appropriate under these circumstances.

III. THE NORTHERN DISTRICT OF ILLINOIS IS BEST SUITED FOR THE CONSOLIDATED MDL PROCEEDINGS.

As set forth above, Papst is located in Germany, not Washington DC. Indeed, to Papst's knowledge, no documents or witnesses are located in Washington DC. On the other hand, Fujifilm USA is found in the Northern District of Illinois, and the Fujifilm Action is pending there. Also, the Northern District of Illinois is centrally located between the actions on the East Coast and the Samsung Action in California, and enjoys excellent nationwide and worldwide air service through O'Hare International Airport outside Chicago.

CONCLUSION

For the reasons set forth above, the Panel should grant Papst Licensing's motion to have all five actions transferred to the Northern District of Illinois for consolidated and coordinated pretrial proceedings.

July 9, 2007

Respectfully submitted,

Campbell Killefer (D.C. Bar No. 268433)
VENABLE LLP
575 7th Street, N.W.
Washington, D.C. 20004
(202) 344-4000 (phone)
(202) 344-8300 (fax)
ckillefer@venable.com (email)

Jerold B. Schnayer, Esq.
WELSH & KATZ, LTD.
120 S. Riverside Plaza, 22nd Floor
Chicago, Illinois 60606
(312) 655-1500 (phone)
(312) 655-1501 (fax)
jbsdocket@welshkatz.com (e-mail)

Attorneys for Papst Licensing GmbH & Co. KG

CERTIFICATE OF SERVICE

I certify that I caused a true and correct copy of Memorandum in Support of Motion For Transfer Of Action To Single District For Consolidated And Coordinated Pre-Trial Proceedings to be served via Overnight Courier, on the following parties pursuant to JPML Rule 5.2(a):

Counsel For Casio, Inc.
Jeffrey M. Gold
Morgan Lewis & Bockius
101 Park Avenue
New York, NY 10178

J. Kevin Fee
Morgan Lewis & Bockius
1111 Pennsylvania Avenue, NW.
Washington, DC 20004

Scott D. Stimpson
The Law Office of Scott D. Stimpson
445 Hamilton Avenue, 11th Floor
White Plains, NY 10601

Counsel For Fujifilm
Steven J. Routh
Sten A. Jensen
Hogan & Hartson LLP
555 Thirteenth Street, NW
Washington, DC 20004

William H. Wright
Robert J. Benson
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067

John R. Inge
Shinjuku Center Building
46th Floor
25-1 Nishi-Shinjuku 1-Chome
Shinjuku-ku Tokyo, 163-0646
Japan

Counsel For Olympus
Phillippe Y. Riesen
Hogan & Hartson
Gaikokuho Jimu Bengoshi Jimusho
Shinjuku Center Building, 46th Floor
25-1 Nishi-Shinjuku 1-chome, Shinjuku-ku
163-0646 Tokyo, Japan

Counsel For Samsung
Brian C. Rupp
Drinker Biddle
191 N. Wacker Drive
Suite 3700
Chicago, IL 60606

and on the following clerks of each district court in which an action is pending, pursuant JPML Rule 5.2(b):

Northern District of Illinois
Michael W. Dobbins
Clerk of Court
Everett McKinley Dirksen Building
219 South Dearborn Street
Chicago, Illinois 60604

District of Delaware
Peter T. Dalleo
Clerk of Court
U.S. District Court
844 N. King Street
Lockbox 18
Wilmington, DE 19801

District of Columbia
Nancy Mayer-Whittington
Clerk's Office
United States District Court
For the District of Columbia
333 Constitution Avenue, N.W.
Washington, D.C. 20001
(202) 354 - 3000

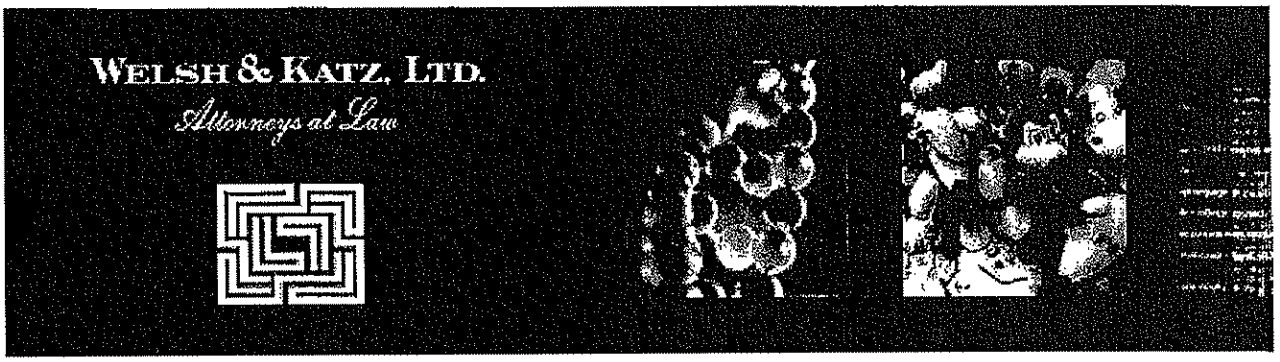
Central District of California
Sherri R. Carter
Clerk of Court
312 North Spring Street, Room G-8
Los Angeles, CA 90012

Done this 9th day of June , 2007.

Campbell Killefer

Campbell Killefer

EXHIBIT P





Jeffrey W. Salmon
Principal

Contact Info | vCard
(312) 655-1500 *direct*
(312) 655-1501 *fax*
jwsalmon@welshkatz.com

Chicago Office:
120 South Riverside Plaza
22nd Floor
Chicago, IL 60606
312-655-1500 *phone*
312-655-1501 *fax*

Practice Areas
Counseling & Opinions
Trade Secrets & IP Valuation
Licensing Agreements & Transactions
Patent Prosecution & Protection
Litigation
Trademarks & Copyrights

Industries Served
Manufacturing

Jeffrey W. Salmon, *Principal*

Education
Indiana University, J.D., 1992
Northwestern University, B.S., Electrical Engineering, 1989

Admissions
Illinois State Bar
Indiana State Bar
Registered to practice before the U.S. Patent and Trademark Office

Biography

Jeffrey W. Salmon is a principal with Welsh & Katz. He engages primarily in prosecution and litigation of various patent, trademark, and copyright matters. During the past several years, Mr. Salmon has been involved in numerous complex patent prosecution matters, including the preparation and prosecution of numerous reissue patent applications regarding various subject matters.

Prior to joining Welsh & Katz, Mr. Salmon was with the law firm of Rockey, Rifkin & Ryther. While in law school, Mr. Salmon clerked for the Indianapolis law firms of Woodard, Emhardt, Naughton, Moriarty & McNett and Lock, Reynolds, Boyd & Weisell.

Memberships/Associations
Chicago Bar Association
Intellectual Property Law Association of Chicago

Representative Work
Representative Electronics-Related Patent Prosecutions
Case Study: Papst Licensing

Publications

Home
About Welsh
Attorney Over
Representative
Industries Ser
Practice Areas
News & Publi
Contact Us

PRINT THIS PAGE

Computers & Electronics
Automotive

Some companies think the only thing patents should gather is dust (PDF file)

Related Information
Memberships / Associations
Publications
Representative Work
W&K News Articles
Speaking Engagements

W&K News Articles

Welsh & Katz Helps Papst Licensing Reach Multi-Million Dollar Settlement



© 2007 Welsh & Katz, Ltd. All rights reserved. | Legal Disclaimer | Site Design: DoubleTake Design | Site Hosting: FirmWise Platform

EXHIBIT Q

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

PAPST LICENSING GmbH & Co. KG, Plaintiff, v. FUJIFILM Corporation, and FUJIFILM U.S.A., Inc., Defendants.	Civil Action No. 07cv3401

MOTION TO DISMISS OR, IN THE ALTERNATIVE, TO TRANSFER THIS ACTION TO THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

Pursuant to Rules 12(b)(2), 12(b)(3) and 12(b)(6) of the Federal Rules of Civil Procedure and 28 U.S.C. § 1404(a), defendants Fujifilm Corporation ("Fujifilm Japan") and Fujifilm U.S.A., Inc. ("Fujifilm U.S.A.") (collectively, "Fujifilm") hereby move to dismiss the Complaint filed by Papst Licensing GmbH & Co. KG ("Papst Licensing") or, in the alternative, to transfer this action to the United States District Court for the District of Columbia.

As set forth more fully in the accompanying memorandum, the District of Columbia is the presumptive venue, under 35 U.S.C. § 293, for patent actions involving foreign holders of U.S. patents, such as Papst Licensing, that have no registered agent for service of process in the United States. Pursuant to that statutory provision, an action already is pending in the United States District Court for the District of Columbia that involves precisely the same two patents asserted by Papst Licensing before this Court. *Casio, Inc. v. Papst Licensing*, 1:06-cv-01751-GK (USDC DC). Thus, this action is not the "first-filed" action on the patents-in-suit, and for that reason alone it should be transferred or dismissed. *See, e.g., Coleman Co. v. Black & Decker Corp.*, 1996 WL 41484 (N.D. Ill. 1996).

EXHIBIT C

Moreover, on June 21, 2007, Fujifilm filed a declaratory judgment Complaint against Papst Licensing in the District of Columbia on the same two patents-in-suit. While Fujifilm's District of Columbia Complaint is well-pleaded in all respects, the bare three-page Complaint filed by Papst Licensing in this Court is defective on its face. In particular, the handful of substantive paragraphs in the Papst Licensing Complaint do not actually allege infringement of the patents-in-suit by Fujifilm, or even a good-faith belief based on reasonable investigation that such infringement has occurred. Rather, Papst Licensing has merely alleged that it hopes "a reasonable opportunity for further investigation or discovery" will "provide evidentiary support" that Fujifilm has committed acts of infringement or has induced others to do so. Because such paper-thin allegations are susceptible to a motion to dismiss under Rule 12(b)(6), the declaratory judgment Complaint filed by Fujifilm in the District of Columbia should also be given priority over the Papst Licensing Complaint under the "first-to-file" doctrine.

Transfer or dismissal of this action is further supported by the relevant equitable considerations, including the interests of justice and the convenience of the parties and witnesses. A transfer also would avoid the prospect of inconsistency between the rulings of this Court and the Casio court in the District of Columbia on issues of claim construction, invalidity, and unenforceability.

Finally, as indicated above, the Complaint filed by Papst Licensing in this Court is defective and should be dismissed because it fails to allege actual infringing activities by Fujifilm, and therefore fails to state a claim upon which relief may be granted. The Complaint further should be dismissed because it fails to identify any specific Fujifilm products that Papst Licensing alleges infringe the patents-in-suit. Moreover, Papst has failed to plead facts that support personal jurisdiction over Fujifilm, in particular with respect to Fujifilm Japan.

For these reasons and on the additional grounds set forth in detail in the attached memorandum of points and authorities and exhibits filed herewith, Fujifilm moves to dismiss or transfer this action pursuant to Rules 12 (b)(2), 12(b)(3) and 12(b)(6) of the Federal Rules of Civil Procedure and 28 U.S.C. § 1404(a).

Dated: June 22, 2007

Respectfully submitted,

By: s/ Matthew J. Gryzlo

Matthew J. Gryzlo (mgryzlo@mwe.com)
Brent A. Hawkins (bhawkins@mwe.com)
McDERMOTT WILL & EMERY LLP
227 West Monroe Street, Suite 4400
Chicago, Illinois 60606
(312) 372-2000
(312) 984-7700 (facsimile)

Counsel for Defendants-Fujifilm Corporation, and Fujifilm U.S.A., Inc.

Of Counsel:

HOGAN & HARTSON LLP
Steven J. Routh (Bar No. 376068)
Sten A. Jensen
555 Thirteenth Street, NW
Washington, DC 20004
Telephone: (202) 637-6472
Telecopier: (202) 637-5910
E-Mail: sjrouth@hhlaw.com
sajensen@hhlaw.com

William H. Wright
Robert J. Benson
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067
Telephone: (310) 785-4670
Telecopier: (310) 785-4601
E-Mail: whwright@hhlaw.com

John R. Inge
Shinjuku Center Building
46th Floor
25-1 Nishi-Shinjuku 1-Chome
Shinjuku-ku Tokyo, 163-0646
Japan
E-Mail: jringe@hhlaw.com

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on June 22, 2007, the Motion To Dismiss Or, In The Alternative, To Transfer This Action To The United States District Court For The District Of Columbia was electronically filed with the Clerk of Court using the CM/ECF system, and notification of such filing was sent via the CM/ECF system, upon:

Jerold B. Schmayer (jbschmayer @welshkatz.com)
John L. Ambrogi (jambrogi@welshkatz.com)
WELSH & KATZ, LTD.
120 South Riverside Plaza, 22nd Floor
Chicago, IL 60606
Telephone: (312) 655-1500
Facsimile: (312) 655-1501

By: s/ Matthew J. Gryzlo

CHI99 4844431-1.080246.0011

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

PAPST LICENSING GmbH & Co. KG, Plaintiff, v. FUJIFILM Corporation, and FUJIFILM U.S.A., Inc., Defendants.	Civil Action No. 07cv3401

MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF DEFENDANTS' MOTION TO DISMISS OR, IN THE ALTERNATIVE, TO TRANSFER THIS ACTION TO THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

Nine months before it filed the above-captioned action, plaintiff Papst Licensing GMbH ("Papst Licensing") was sued by Casio, Inc. in the District of Columbia on the same two patents now asserted against defendants Fujifilm Corporation ("Fujifilm Japan") and Fujifilm U.S.A., Inc. ("Fujifilm U.S.A.") (collectively, "Fujifilm"). *See Casio, Inc. v. Papst Licensing*, 1:06-cv-01751-GK (USDC DC) ("Casio Action"). The Casio Action involves issues relating to claim construction, infringement, and validity of U.S. Patent No. 6,470,399 (the '399 patent) and U.S. Patent No.6,895,449 (the '449 patent), just as this action will involve those same issues. More recently, Fujifilm filed a declaratory judgment action in the District of Columbia ("Fujifilm DJ Action) raising the same two patents and same set of issues.

Under the "first-to-file" rule endorsed by this Court and the Federal Circuit, the existence of the Casio Action and the Fujifilm DJ Action in the District of Columbia support the dismissal of this "second-filed" case. Alternatively, this case should be transferred to the U.S. District Court for the District of Columbia for consideration in connection with those two "first-filed

cases pending there. Moreover, as described below, considerations of judicial economy, the convenience of parties and witnesses, forum shopping, and the lack of any meaningful connection between this action and the Northern District of Illinois further support the dismissal or transfer of this action. Accordingly, Fujifilm moves to dismiss this lawsuit under Federal Rule of Civil Procedure 12(b)(3) or, alternatively, for transfer pursuant to 28 U.S.C. § 1404(a).

The Papst Complaint also is deficient on its face and should be dismissed pursuant to Rules 12(b)(2) and 12(b)(6). Although it purports to assert a claim of patent infringement, the Complaint does not contain any allegation that Fujifilm is in fact infringing the patents-in-suit. Instead, the Complaint alleges merely that "reasonable opportunity for further investigation or discovery is likely to provide evidentiary support" for a claim of infringement. Complaint ¶ 9. The Complaint further is defective because it fails to identify any specific accused products made or sold by Fujifilm. And, the Complaint also fails to allege sufficient facts to establish personal jurisdiction over Fujifilm, particularly with respect to Fujifilm Japan. While Fujifilm acknowledges that the Federal Rules allow notice pleading, the Papst Complaint fails to satisfy even that threshold standard, and, accordingly, it should be dismissed.

Factual Background

Papst Licensing has sent numerous "warning letters" to companies that manufacture or sell digital cameras threatening them with litigation if they did not agree to license the '399 and '449 patents. In response, on or about October 16, 2006, Casio filed a Complaint against Papst Licensing in the United States District Court for the District of Columbia, pursuant to 35 U.S.C. § 293, seeking a declaratory judgment that the '399 and '449 patents are invalid and not infringed. *See* Exhibit A. A Scheduling Order has been entered in the Casio Action, and discovery is under way. Significantly, on May 31, 2007, Magistrate Judge Robinson in the

District of Columbia sanctioned Papst Licensing for failing to comply with its discovery obligations. *See* Exhibit B at 25-28. Thus, while Papst Licensing already is a party to litigation in the District of Columbia involving the same patents-in-suit in the instant action, it apparently has decided that the District of Columbia is no longer a forum to its liking.

On June 15, 2007, Papst Licensing filed the instant action against Fujifilm in this Court. The patents-in-suit in this case are the same two patents that are at issue in the Casio Action pending in the District of Columbia.

On June 21, 2007, Fujifilm filed a declaratory judgment action in the United States District Court for the District of Columbia. *See* Exhibit C. In that Complaint, Fujifilm seeks relief that includes the relief sought by Casio in the Casio Action. Specifically, Fujifilm seeks a declaration that the '399 and '449 patents are invalid and not infringed.

Argument

I. THIS ACTION SHOULD BE DISMISSED OR TRANSFERRED TO THE DISTRICT OF COLUMBIA

A. This Case Should Be Dismissed Or Transferred To The District Of Columbia For Consolidation With The First-Filed Casio Action

Because the Casio Action is the first-filed action seeking to adjudicate the validity and other issues relating to the '399 and '449 patents, the "first-to-file" rule supports dismissal of this action or transfer to the District of Columbia.

> In resolving venue disputes and issues of appropriate forum where two actions involve closely related patent infringement questions, the Federal Circuit has strongly endorsed the 'first-to-file' doctrine.

Vanguard Products Group, Inc. v. Protex Int'l Corp., 2006 WL 695700, *2 (N.D. Ill. 2006). The "first-to-file rule" provides that "if actions involving nearly identical parties and issues have been filed in two different courts, the court in which the first suit was filed should generally proceed to judgment." *Id.*

In circumstances such as those now before this Court, the first-to-file rule weighs in favor of dismissing the second-filed action for improper venue under Federal Rule of Civil Procedure 12(b)(3). *See, e.g., Vanguard* (dismissing infringement action in favor of first-filed declaratory judgment action); *Design Automotive Group, Inc. v. Lund Indus., Inc.*, 1996 WL 377063 (N.D. Ill. 1996) (same). Alternatively, the second-filed action may be transferred under 28 U.S.C. § 1404(a). *See, e.g., Bowe, Bell & Howell Co. v. MidSouth Technologies, LLC*, 2005 WL 1651167 (N.D. Ill. 2005) (electing to transfer rather than dismiss). The "first-to file" rule thus strongly favors dismissal or transfer of the Complaint filed by Papst Licensing in this Court, because the previously-filed Casio Action involves identical issues and was filed nine months ago.[1/]

This Court's decision in *Coleman Co. v. Black & Decker Corp.*, 1996 WL 41484 (N.D. Ill. 1996) is directly on point. In September and October of 1995, Black & Decker sued several defendants for patent infringement in the Eastern District of Virginia. Subsequently, in December 1995, Coleman – which was not a party to the Virginia action – brought a declaratory judgment action against Black & Decker in Illinois. Under those facts, this Court granted Black & Decker's motion to transfer the Illinois action to Virginia, even though Coleman was not a party to the first-filed Virginia action. Although the Illinois action was the first action filed between Coleman and Black & Decker, "the first case filed concerning the validity of the patents-in-suit was in Virginia." *Id.* Accordingly, this Court held that "the pre-existing Virginia litigation weighs heavily against maintaining this case in this district." *See also Abbott Laboratories v. Selfcare, Inc.*, 1999 WL 162805 (N.D. Ill. 1999) (granting transfer to Massachusetts, venue of first-filed action, where "the two actions, even though directed to different patents, involve the same parties and substantially similar technology").

1/ Although Fujifilm has yet to answer or file counterclaims in this Court, it has asserted invalidity in the Fujifilm DJ Action and will do so in this action as well if it is not dismissed.

As in *Coleman*, the Casio Action was filed first, and even though it involves different accused infringers (Casio rather than Fujifilm), it seeks adjudication of the same issues of law and fact. The invalidity of the Papst '399 and '449 patents is at issue in both cases. Allowing both cases to proceed simultaneously would give rise to the "possibility of inconsistent judgments and patent interpretations." *Coleman*, 1996 WL 41484. Accordingly, given that the Casio Action involves the same issues of patent invalidity, the "first-to-file" rule weighs heavily in favor of dismissal of this action or, alternatively, transfer to the District of Columbia.

B. The Declaratory Judgment Action Filed By Fujifilm In The District Of Columbia Should Also Be Considered A "First-Filed" Action

As set forth below in Section II, the Complaint filed by Papst Licensing in this action is fatally defective and dismissible under Fed. R. Civ. P. 12(b)(2) and 12(b)(6). The Complaint does not adequately allege that Fujifilm has infringed the patents-in-suit, it does not identify any specific accused products, and it fails to allege facts establishing personal jurisdiction over Fujifilm Japan. Thus, the declaratory judgment Complaint filed by Fujifilm in the District of Columbia is the first-filed, *non-defective* action between Fujifilm and Papst Licensing, and as such it should be given priority over the instant action. It is well-established that the first-filed action should be preferred regardless of whether it is a declaratory judgment action. *Vanguard*, at *2; *accord, e.g., Bowe, Bell & Howell Co. v. MidSouth Technologies, LLC*, 2005 WL 1651167 (N.D. Ill. 2005). Thus, the Fujifilm DJ Action also is a first-filed action that supports dismissal of this action or transfer to the District of Columbia.

C. Equitable Considerations Further Support Dismissal Of This Action Or Transfer To The District Of Columbia

The strong presumption that the instant case should be dismissed or transferred to the District of Columbia, in favor of the first-filed Casio Action and Fujifilm DJ Action, is reinforced by the following equitable considerations: "(1) jurisdiction over the parties, (2)

judicial efficiencies and economies, (3) conveniences to the parties, (4) availability and convenience of witnesses, and (5) the extent to which the declaratory judgment action filed in another forum is anticipatory and motivated by forum shopping." *Vanguard*, 2006 WL 695700 at *4. Those same considerations also support transfer of this action under 28 U.S.C. § 1404(a). *Holley Performance Products, Inc. v. Barry Grant, Inc.* 2004 WL 3119017 at * 5 (N.D. Ill. 2004) ("The factors the court considers when deciding whether to dismiss an ... action in favor of litigation pending in a different district are the same as the factors considered when deciding to transfer venue to another district."). *Accord, e.g., Abbott*, 1999 WL 162805 at * 1; *Law Bulletin Publ'g. Co. v. LRP Publications, Inc.*, 992 F.Supp. 1014, 1017 (N.D.Ill.1998).

The relevant equitable considerations thus provide further support for relief requested in the motion. Moreover, even if this Court were to deem the Papst Complaint to be the "first-filed" action – which it should not – the aforementioned equitable considerations would still support transfer of this case to the District of Columbia. *Abbott*, 1999 WL 162805 at * 3, *citing Serco Servs. Co., L.P. v. Kelley Co., Inc.*, 51 F.3d 1037, 1039 (Fed.Cir.1995).

1. **The Interests Of Justice Support Transfer**

The most important factor that governs whether to dismiss or transfer a duplicative action is "the interests of justice." The interests of justice "may be determinative in a particular case, even if the convenience of the parties and witnesses might call for a different result." *Abbott*, 1999 WL 162805 at * 1. "The interest of justice analysis focuses on efficient functioning of the courts, rather than the private interests of the litigants." *Holley*, 2004 WL 3119017 at * 7 (*citing TIG Ins. Co. v. Brightly Galvanized Products, Inc.*, 911 F.Supp. 344, 346 (N.D.Ill.1996)). "In determining the interests of justice, the court considers the possibility of consolidation with related litigation." *Holley*, 2004 WL 3119017 at * 7. "Public interest factors or interests of

justice 'relate to the court's familiarity with the applicable law, the speed at which the case will proceed to trial, and the desirability of resolving controversies in their locale.'" *Technical Concepts L.P. v. Zurn Indus., Inc.*, 2002 WL 31433408 at * 2 (N.D. Ill. 2002) (*citing, VonHoldt v. Husky Injecting Molding System Ltd.*, 887 F.Supp. 185, 188 (N.D.Ill.1995)).

In *Coleman,* this Court found the "interests of justice" persuasive in its determination to transfer an infringement action to Virginia, even though the previously-filed action involved different accused infringers. The Court reasoned:

> The interests of justice clearly favor Virginia over this forum. The '206 patent's validity and scope has been at issue in the Eastern District of Virginia since September 1995. Common questions of fact and law are involved. ... Thus, it is readily apparent that there is a possibility of inconsistent judgments and patent interpretations if this case is not transferred to the Eastern District of Virginia. With or without Coleman, the Virginia litigation will continue ... Thus, the feasibility of consolidating the cases in Virginia strongly favors transferring venue. [citations omitted] Because scarce judicial resources may only be conserved by transferring this case to the Eastern District of Virginia, the interests of justice clearly weigh [in favor of] Virginia."

Coleman Co. v. Black & Decker Corp., 1996 WL 41484 (N.D. Ill. 1996).

Similarly, transfer was ordered by this Court in *Abbott Laboratories v. Selfcare, Inc.*, 1999 WL 162805 (N.D. Ill. 1999), even though the previously-filed action did not involve the same patents, because the two cases were sufficiently related that it would be judicially efficient to consolidate them. The *Abbott* Court's reasoning supports dismissal or transfer of this case:

> "When a case is transferred to a district in which a related case is pending, the expectation is that the two cases will be consolidated pursuant to Rule 42(a) of the Federal Rules of Civil Procedure, if practicable. *Waller v. Burlington N. R.R. Co.*, 650 F.Supp. 988, 991 (N.D.Ill.1987). Consolidation not only conserves scarce judicial resources, but also reduces the resources ultimately expended by the litigants. *Keppen v. Burlington N. R.R. Co.*, 749 F.Supp. 181, 183-84 (N.D.Ill.1990). By preventing duplicative efforts on the part of both the courts and the parties, transfer and subsequent consolidation serve the interests of justice within the meaning of the venue transfer statute. As the Supreme Court has acknowledged, "[t]o permit a situation in which two cases involving precisely the same issues are simultaneously pending in different District Courts leads to the

> wastefulness of time, energy and money that § 1404(a) was designed to prevent." *Continental Grain Co. v. Barge FBL-585*, 364 U.S. 19, 26 (1960). Transfer of venue also curbs the risk of inconsistent judgments. *Countryman v. Stein Roe & Farnham*, 681 F.Supp. 479, 484 (N.D.Ill.1987). These concerns have led this district to adopt "a strong policy in favor of transferring a case to the district where a related action is pending." *Keppen*, 749 F.Supp. at 184.

The same factors found persuasive by this Court in *Coleman* and *Abbott* are equally persuasive here. The Casio Action has been pending for nine months longer than the present case. Accordingly, the Court in the Casio Action is likely to consider and issue Markman rulings construing the '399 and '449 patents prior to a Markman hearing in this case. Proceeding with both cases simultaneously also presents the possibility of inconsistent discovery rulings and inconsistent determinations on the merits on common issues such as invalidity. Moreover, there is an enormous duplication of judicial time and effort involved in adjudicating identical issues of patent validity, claim construction, and possibly infringement, in two different Courts. Such a duplication of effort, combined with the potential for inconsistent results, weighs strongly in favor of transferring this case to the District of Columbia.

2. The Convenience Of Parties And Witnesses Supports Transfer

It is well-settled that a "plaintiff's choice of forum ha[s] reduced value where the forum lacks any significant contact with the underlying cause of action." *Hotel Constructors, Inc. v. Seagrave Corp.*, 543 F.Supp. 1048, 1050 (N.D. Ill. 1982) (citing *Cunningham v. Cunningham*, 477 F.Supp. 632, 634 (N.D. Ill. 1979)). Patent infringement cases are centered around the activities of the accused infringer, not the patent holder. *See Gen 17, Inc. v. Sun Microsystems, Inc.*, 953 F.Supp. 240, 243 (N.D. Ill. 1997). "[W]here the plaintiff's choice is not its resident forum, the chosen forum is entitled to less deference" and becomes "only one of many factors the court considers." *Holley*, 2004 WL 3119017 at * 6; *Bryant v. ITT Corp.*, 48 F.Supp.2d 829, 832 (N.D.Ill.1999); *Hotel Constructors*, 543 F.Supp. at 1050.

According to its Complaint, "Papst Licensing is a company existing under the laws of the Federal Republic of Germany with its principal place of business [in] Germany." Complaint ¶ 3 2/. It apparently chose the Northern District of Illinois for the convenience of its counsel, rather than for that of any party or witness. Convenience of counsel, however, is entitled to *no weight*. *See, e.g., Wolford v. Amer. Home Prods. Corp.*, 948 F. Supp. 47, 50 (N.D. Ill. 1996).

The only connection with Illinois alleged by Papst Licensing is that some, unidentified Fujifilm products are allegedly sold here. None of the manufacturing or design work is alleged to occur in Illinois. Moreover, as Papst admits, there is nothing unique about Fujifilm having a sales presence in Illinois, because Fujifilm has an "on-going business *throughout* the United States." Complaint ¶ 4 (emphasis added). When a product is distributed across the United States, the fact that some entities sell the product in Illinois is insufficient to establish a substantial connection to this forum when considering a motion to transfer. "[S]ales alone are insufficient to establish a substantial connection to the forum if the defendant's goods are sold in many states." *Technical Concepts*, 2002 WL 31433408 at * 3, *quoting, Energaire Corp. v. E.S. Originals, Inc.*, 1999 U.S. Dist. LEXIS 17304, at * 7 (N.D.Ill. Oct. 27, 1999), and *Anchor Wall Systems, Inc. v. R & D Concrete Prods., Inc.*, 55 F.Supp.2d 871, 874 (N.D.Ill.1999).

The convenience of witnesses and parties weighs in favor of the District of Columbia. Among other things, Fujifilm U.S.A. is a New York corporation and its principal place of business is in Valhalla, New York, which is closer and more easily accessible to the District of Columbia than Chicago.

2/ It is beyond question that Papst Licensing is subject to the jurisdiction of the District Court for the District of Columbia. *See* 35 U.S.C. § 293. In contrast, as discussed in Section II.C., *infra.*, the Complaint in this action fails to allege facts sufficient to establish personal jurisdiction over Fujifilm Japan and thus should be dismissed as to that defendant. That fact also weighs in favor of dismissing or transferring this action in favor of the declaratory judgment action now pending in the District of Columbia. *Abbott*, 1999 WL 162805 at * 3.

Again, the facts of this case are highly analogous to *Coleman*. In *Coleman*, this Court transferred an action to Virginia even though the defendant had sales offices in the Chicago area and solicited customers in Chicago. The parties were not Illinois corporations, they did not conduct any manufacturing or design activities in Illinois, there were no significant witnesses within the Court's subpoena power, and Illinois lacked any "significant" connection with the case. "Limited sales activities," without more, did not warrant keeping the case in Chicago. Moreover, the defendant's facilities in Connecticut and North Carolina were closer to the transferee forum (Virginia) that to Illinois. *Coleman*, 1996 WL 41484.

Accordingly, on balance, the convenience of the parties and witnesses supports dismissal of this action or transfer to the District of Columbia.

3. Papst Licensing's Apparent Forum Shopping Also Supports Transfer

In the Casio Action, Magistrate Judge Robinson recently granted Casio's motion for sanctions against Papst for failing to provide discovery. Although Papst Licensing's request for a clarification of that sanctions order remains pending, it appears that the sanctions imposed on Papst Licensing may include waiver of certain privileges and protections over documents requested by Casio in discovery as well as attorneys' fees and costs associated with Casio's motion. With that recent set-back in the Casio Action, due to Papst Licensing's own misconduct, it appears that Papst Licensing has decided to look for other district courts in which to seek resolution of disputes relating to the patents-in-suit. Particularly in light of the lack of any meaningful connection between the Northern District of Illinois and Papst Licensing, Fujifilm, and/or the subject matter of the instant action, it is apparent that Papst Licensing is shopping for a more favorable forum than the District of Columbia in which to press its claims. Such forum shopping should not be condoned.

II. THE COMPLAINT ALSO SHOULD BE DISMISSED UNDER FED. R. CIV P. 12(b)(2) and 12(b)(6)

A. The Complaint Should Be Dismissed For Failure To State A Claim

In ruling on a Rule 12(b)(6) motion, a Court should consider only well-pleaded facts. *Chisholm v. Foothill Capital Corp.*, 940 F. Supp. 1273, 1280 (N.D. Ill. 1996). The Court is "not obliged to accept mere conclusory allegations, without any supporting facts, as true." *Id.* (*citing Tamari v. Bache & Co. (Lebanon) S.A.L.*, 565 F.2d 1194, 1199 (7th Cir. 1977)). Indeed, the Supreme Court recently recognized that "a plaintiff's obligation to provide the 'grounds' of his 'entitle[ment] to relief' requires more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do." *Bell Atlantic Corp. v. Twombly*, 127 S. Ct. 1955, 1964-65 (May 21, 2007). Accordingly, a plaintiff cannot avoid dismissal "simply by attaching bare legal conclusions to narrated facts which fail to outline the bases of their claims." *Perkins v. Silverstein*, 939 F.2d 463, 466 (7th Cir. 1991).

The Complaint filed by Papst Licensing in this Court fails to satisfy even notice pleading standards. Indeed, it does not allege any act of patent infringement. Instead, it alleges only that "[a] reasonable opportunity for further investigation or discovery is likely to provide evidentiary support [sic] the Fujifilm defendants have made, used, sold or offered to sell to numerous customers in the United States or have imported into the United States digital cameras which infringe the Patents in Suit." Complaint ¶ 9. It contains similarly vague allegations with respect to contributory, induced and willful infringement. *See id.* ¶¶ 10-11. Thus, the allegations do not even support a conclusion that Papst Licensing has conducted an investigation of available facts sufficient to support a good faith belief that Fujifilm has infringed the patents-in-suit.

Indeed, if any reasonable inference can be drawn from the highly conclusory allegations of the Complaint, it is that Papst Licensing has not conducted a reasonable investigation or

analysis of its claims, because it has alleged merely that "further investigation or discovery" might lead to evidence to support a claim of infringement. If any such "evidence" had been identified to date, or Papst Licensing undoubtedly would have alleged at least some fact relating to infringement of the patents-in-suit. Because the Complaint does nothing more than state a "suspicion [of] a legally cognizable right of action," it must be dismissed under Rule 12(b)(6). *See Bell Atlantic*, 127 S. Ct. at 1965 (quoting 5 C. Wright & A. Miller, FEDERAL PRACTICE AND PROCEDURE § 1216, pp. 235-236 (3d ed. 2004)).

B. The Complaint Should Be Dismissed For Failure To Identify Accused Products

It is well-established that "[f]or fair notice to be given, a complaint must at least include the operative facts upon which plaintiff bases his claim." *Kyle v. Morton High Sch.*, 144 F.3d 448, 455 (7th Cir. 1998) (internal quotation marks omitted)). In the context of a patent infringement complaint, a plaintiff must either identify the specific products it is accusing of infringement or provide a "limiting parameter" that would allow defendant to determine which of its products are accused products. *See, e.g., Bay Industries v. Tru-Arx Mfg., L.L.C.*, 2006 WL 3469599 (E.D. Wis. 2006); *Agilent Tech., Inc. v. Micromuse, Inc.*, 2004 WL 2346152 (S.D.N.Y. 2004); *In re Papst Licensing GmbH Patent Litigation*, 2001 WL 179926 (E.D. La. 2001). The reason for this rule is that a defendant "should not have to guess which of its products infringe nor guess how its products might fall within plaintiff's interpretation of the claims of the patent". *Bay Industries*, 2006 WL 3469599 at *2. *See also eSoft, Inc. v. Astaro Corp.*, 2006 U.S. Dist. LEXIS 52336, *4 (D. Colo. 2006) ("Defendant cannot realistically be expected to frame a responsive pleading without risk of prejudice in the absence of any indication as to which of its products are accused.").

The Complaint before this Court does not identify any specific accused products; instead, it broadly asserts a potential claim against certain unnamed Fujifilm "digital cameras." Fujifilm has manufactured and sold dozens of different digital camera models with different types of operating systems, features, and components. The Complaint does not identify even a single Fujifilm digital camera model that is accused of infringement. Nor does it provide any "limiting parameter" that would enable Fujifilm to determine which products Papst Licensing is accusing. For that reason as well, the Complaint is defective and should be dismissed.

C. The Complaint Fails to Plead Facts Establishing That This Court Has Personal Jurisdiction Over Fujifilm

Under Rule 12(b)(2), a Complaint must be dismissed if it fails to allege facts sufficient to establish that the Court has jurisdiction over a defendant. This Court conducts a two-step inquiry to evaluate whether a complaint adequately pleads personal jurisdiction: (1) it determines whether plaintiff has pled facts demonstrating that defendants are subject to jurisdiction under Illinois' long-arm statute; and (2) it considers whether plaintiff has pled facts demonstrating that the exercise of jurisdiction comports with due process requirements. *See Brooks v. Bekins Van Lines, LLC*, 2006 WL 3524426 (N.D. Ill. 2006). Plaintiff bears the burden of making a prima facie showing that the complaint satisfies the statutory and constitutional requirements for personal jurisdiction. *See Vandeveld v. Christoph*, 877 F. Supp. 1160, 1163 (N.D. Ill. 1995).

The Complaint fails to establish personal jurisdiction over defendants in this case. With respect to Fujifilm U.S.A., plaintiff has alleged only that it has a sales office in Hanover Park, Illinois. Complaint ¶ 4. The Complaint contains no allegations regarding the involvement of this sales office in the conduct that is alleged to be infringing. Likewise, there are no allegations that would demonstrate that this office engages in the type of continuous and systematic contacts with this forum that would support the exercise of general jurisdiction over Fujifilm U.S.A.

The Complaint even more clearly fails to allege facts sufficient to support this Court's exercise of personal jurisdiction over Fujifilm Japan. Plaintiff alleges only that Fujifilm is a "multinational corporation having an established and on-going business throughout the United States." Complaint ¶ 4. That allegation sets forth no facts relating to Fujifilm Japan's contacts with this forum. Moreover, courts in Seventh Circuit have repeatedly held that this type of conclusory allegation is insufficient to support the exercise of personal jurisdiction over a non-resident defendant. *See, e.g., Gentry v. Environmental Recycling, Inc.*, No. 1:05-CV-0507-SEB-VSS, 2006 WL 3198025 (S.D. Ind. March 6, 2006); *Wasendorf v. DBH Brokerhaus AG*, No. 04-C-1904, 2004 WL 2872763 (N.D.Ill. Dec. 13, 2004); *Sanderson v. Spectrum Labs, Inc.*, 227, F.Supp.2d 1001, 1013 (N.D. Ind. 2000); *Search Force, Inc. v. Dataforce Intern., Inc.*, 112 F.Supp.2d 771, 774 (S.D.Ind.2000); *Meltzer v. McGeorge School of Law*, No. 87 C 2542 1997 WL 28263 (N.D. Ill. Nov. 16, 1987); *see also Massachusetts School of Law at Andover, Inc. v. American Bar Ass'n*, 107 F.3d 1026, 1042 (3d Cir.1997) ("mere unsupported allegation that the defendant 'transacts business' in an area is 'clearly frivolous' ").

To the extent the Complaint alleges the existence of a "Fujifilm" sales office in Hanover Park, Illinois, Complaint ¶ 4, that allegation also is insufficient to establish personal jurisdiction over Fujifilm Japan. As the Complaint itself acknowledges, Fujifilm U.S.A. and Fujifilm Japan are separate corporations. The sales and distribution center located in Hanover Park, Illinois is an office of Fujifilm U.S.A., not Fujifilm Japan. *See* Exhibit D, Declaration of Jonathan E. File ¶¶ 5-6 (submitted solely in support of Fujifilm's motion under Rule 12(b)(2)). The law is clear that personal jurisdiction over a parent corporation cannot be premised merely on the conduct of a subsidiary. *See IDS Life Ins. Co. v. SunAmerica Life Ins. Co.*, 136 F.3d 537, 540 (7th Cir.1998)). *Accord, e.g., Purdue Research Found. v. Sanofi-Synthelabo, S.A.*, 338 F.3d 773,

788 n.17 (7th Cir. 2003); *Joseph P. Caulfield & Associates, Inc. v. Litho Productions, Inc.*, 155 F.3d 883, 887 (7th Cir. 1998); *A.M Mfg. Co., Inc. v. J.C. Ford Co.*, 2006 WL 1987825 (N.D. Ill. 2006); *Faust Printing, Inc. v. Man Capital Corp.*, 2006 WL 1719532 (N.D. Ill. 2006).

Because the Complaint contains no factual allegations regarding the contacts of Fujifilm Japan with this forum, and because the contacts of Fujifilm U.S.A. cannot, as a matter of law, be attributed to Fujifilm Japan, the Complaint is deficient and should be dismissed because it does not adequately plead personal jurisdiction over Fuji Japan.[3/]

Conclusion

For the foregoing reasons, the Court should dismiss the Complaint for improper venue under Rule 12(b)(3), for failure to state a claim as required by Rule 12(b)(6), and for failure to allege facts establishing personal jurisdiction under Rule 12(b)(2). In the alternative, the Court should transfer this case to the United States District Court for the District of Columbia where there are actions already pending that involve the same patents asserted in this action.

Dated: June 22, 2007

Respectfully submitted,

By: s/ Matthew J. Gryzlo

Matthew J. Gryzlo (mgryzlo@mwe.com)
Brent A. Hawkins (bhawkins@mwe.com)
McDERMOTT WILL & EMERY LLP
227 West Monroe Street, Suite 4400
Chicago, Illinois 60606
(312) 372-2000
(312) 984-7700 (facsimile)

Counsel for Defendants-Fujifilm Corporation, and Fujifilm U.S.A., Inc.

3/ The Complaint is defective for the additional reason that it does not allege that either of the Fujifilm defendants has committed any acts of infringement in this judicial district under 28 U.S.C. § 1400(b).

Of Counsel:

HOGAN & HARTSON LLP :
Steven J. Routh (Bar No. 376068)
Sten A. Jensen
555 Thirteenth Street, NW
Washington, DC 20004
Telephone: (202) 637-6472
Telecopier: (202) 637-5910
E-Mail: sjrouth@hhlaw.com
sajensen@hhlaw.com

William H. Wright
Robert J. Benson
1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067
Telephone: (310) 785-4670
Telecopier: (310) 785-4601
E-Mail: whwright@hhlaw.com

John R. Inge
Shinjuku Center Building
46th Floor
25-1 Nishi-Shinjuku 1-Chome
Shinjuku-ku Tokyo, 163-0646
Japan
E-Mail: jringe@hhlaw.com

CERTIFICATE OF SERVICE

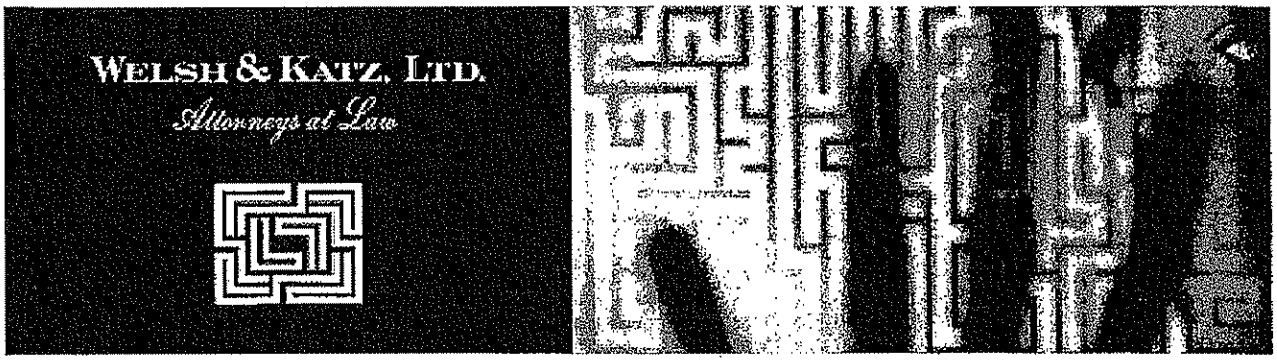
The undersigned hereby certifies that on June 22, 2007, the Memorandum Of Points And Authorities In Support Of Defendants' Motion To Dismiss Or, In The Alternative, To Transfer This Action To The United States District Court For The District Of Columbia was electronically filed with the Clerk of Court using the CM/ECF system, and notification of such filing was sent via the CM/ECF system, upon:

Jerold B. Schnayer (jbschnayer @welshkatz.com)
John L. Ambrogi (jambrogi@welshkatz.com)
WELSH & KATZ, LTD.
120 South Riverside Plaza, 22nd Floor
Chicago, IL 60606
Telephone: (312) 655-1500
Facsimile: (312) 655-1501

By: s/ Matthew J. Gryzlo

CHI99 4844442-1.080246.0011

EXHIBIT R



Contact Us

Chicago Office
120 South Riverside Plaza
22nd Floor
Chicago, IL 60606-3912
Phone: 312-655-1500
Fax: 312-655-1501

Washington, D.C. Office
Crystal Plaza One, Suite 311
2001 Jefferson Davis Highway
Arlington, VA 22202-3603
Phone: 703-415-4777

Home
About Welsh &
Attorney Over
Representative
Industries Serv
Practice Areas
News & Public
Contact Us

PRINT THIS PAGE

The Chicago Office

Welsh & Katz, Ltd. is based in downtown Chicago. The office is conveniently located, with nearby public transportation and easy access to courts. Just west of the Chicago River, the office is situated between Monroe and Adams Streets on Riverside Plaza — steps away from Union Station and two blocks away from the Metra station, Chicago's link to its surrounding areas.
Map of Downtown Chicago Location

The Washington Office

The Washington office can be found just across the Potomac River in Arlington, Virginia. With such proximity to the nation's legislative hub, the U.S. Copyright Office, and the U.S. Patent and Trademark Office, Welsh & Katz is better able to serve its clients.

We welcome you to complete this form to request further information about our firm.
*Required fields

*Name:
*Company:
Products(s):
Fax:
*Phone:
*Email

Areas of Interest:
- [ ] General Intellectual Property Counseling
- [ ] Litigation
- [ ] U.S. or Foreign Patents
- [x] U.S. or Foreign Trademarks and Copyrights

Technical Areas of Interest:
- [x] Biotech/Pharmaceutical
- [x] Chemical/Material Science
- [ ] Electrical/Electronics/Computer
- [x] Mechanical

- [ ] Trade Secrets
- [ ] Licensing
- [ ] Anti-Counterfeiting/Stopping Product Piracy
- [ ] Expert Witness Assistance
- [ ] Clearance Opinions
- [ ] Domain Name Issues
- [ ] Nanotechnology
- [ ] Business Process/Method
- [ ] Hatch-Waxman

I would like to subscribe to these publications:

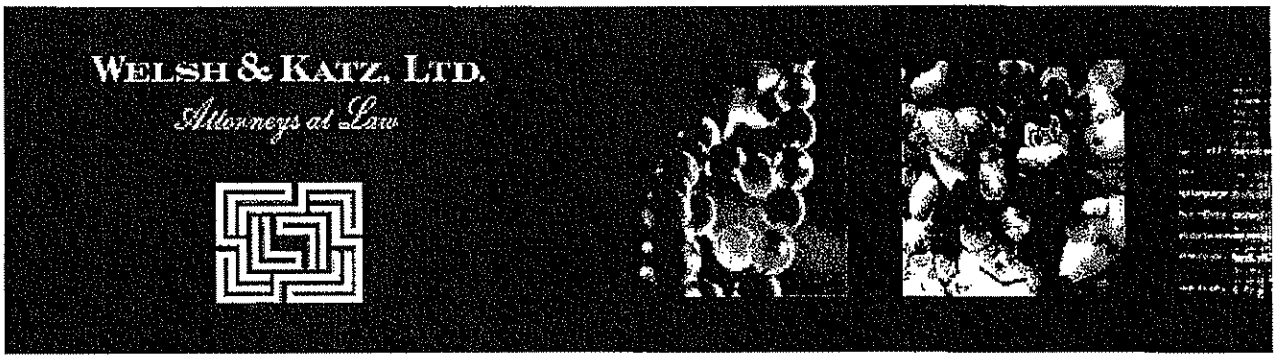
- [ ] Welsh & Katz News
- [ ] Client Alerts

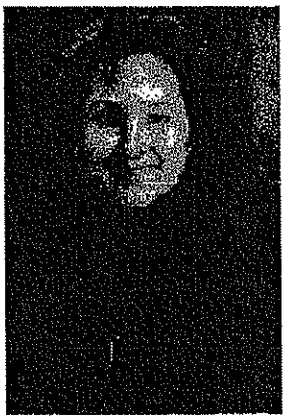
Comments:

Submit This Form

© 2007 Welsh & Katz, Ltd. All rights reserved. | Legal Disclaimer | Site Design: DoubleTake Design | Site Hosting: FirmWise Platform

EXHIBIT S





Michele S. Katz
Principal

Contact Info | vCard
(312) 655-1500 *direct*
(312) 655-1501 *fax*
mkatz@welshkatz.com

Chicago Office:
120 South Riverside Plaza
22nd Floor
Chicago, IL 60606
312-655-1500 *phone*
312-655-1501 *fax*

Practice Areas
Trade Secrets & IP Valuation
Licensing Agreements & Transactions
Litigation
Anti-Counterfeiting
Trademarks & Copyrights

Industries Served
Pharmaceuticals
Manufacturing

Michele S. Katz, *Principal*

Education
Chicago Kent College of Law, J.D. International and Comparative Law Certificate Program, 2000
Indiana University, B.A., Psychology and Jewish Studies, 1997

Admissions
Illinois State Bar
District of Columbia Bar
Minnesota State Bar
U.S. District Court for the Northern District of Illinois

Biography

Michele S. Katz is a principal with the law firm of Welsh & Katz, Ltd., where she is engaged in client counseling, strategic analysis, litigation, prosecution, and enforcement in all areas of intellectual property law. Ms. Katz has experience in the enforcement of trademarks and copyrights against counterfeiters and infringers, with representation of distinguished clients including Ty Inc., regarding the Beanie Babies® plush toys, Bally Total Fitness Holding Corp. with respect to Bally Total Fitness® health clubs, and Blue Cross and Blue Shield Association. Michele conducts trademark searches, prepares opinions, and monitors trademarks to confirm that intellectual property rights of the firm's clients are used properly and effectively. She also manages copyright registration portfolios in addition to familiarizing U.S. Customs with client designs in an effort to stop counterfeit goods at U.S. borders. In the area of patents, Michele has had responsibilities in complex patent litigation matters including such varied products as textiles, disk drives, and airbags. She also manages patent portfolios to ensure U.S. and foreign patent protection for the firm's clients.

Ms. Katz has represented a large number of Hispanic owned and managed businesses in a variety of different industries including, clothing, jewelry, wines and spirits, various forms of media, firearms, scientific research and education, legal, electronic and industrial components, machinery,

Automotive

Related Information
Memberships / Associations
Publications
Representative Work
W&K News Articles
Speaking Engagements

pharmaceuticals, music playing devices, packaging, beverage and utensil containers. She is also an intellectual property advisor to the Board of Directors of the National Hispanic Press Foundation.

Michele has co-authored an article entitled "Introduction To Trademark Law: Protect Your Brand Identity And Reputation." Excerpts of this article were published in Spanish in *Enlace* and appear in www.enlacelink.com, July 26, 2002 edition. She has also co-authored "Introduction To Copyright Law: Seeking Protection For Your Work," which was published in *La Oferta Review*, Vol. XXII, No. 24, June 14, 2002. Excerpts from this article were published in Spanish and appear in www.mundohispanico.com, www.enlacelink.com, May, 2002 editions. In addition, Michele has co-authored the article entitled "For Sale Or For Family: Why Trademarks Are Vital To Your Business And Increase Its Value," which was published in *NAIIP, Inc. TODAY*, October 7, 2004.

Ms. Katz has appeared as a speaker on "Fundamentals of Copyright Law: What the Publishing Industry Should Know" at The National Association of Hispanic Publications 18th Annual Convention, Dallas, Texas (Week of March 11, 2002), on "How to Avoid Being Sued" at The National Association of Hispanic Publications 19th Annual Convention, Las Vegas, Nevada (Week of March 19, 2003), and conducted a Trademark and Copyright Seminar for the Attendees at the National Association of Hispanic Publications 21st Annual Convention, Philadelphia, Pennsylvania (Week of March 9, 2005).

Prior to joining Welsh & Katz, Ltd., Ms. Katz interned at the Intellectual Property firm, Clarke, Modet & Co., located in Madrid, Spain. She also studied at L'Ecole de la Langue Français pour Etrangers in Paris in 1999. In Chicago, she served as student assistant and certified mediator for conflict resolution, and was employed by the City of Chicago as a prosecutor at the Cook County Circuit Court, Traffic Division.

Ms. Katz received her Juris Doctor from Chicago Kent College of Law with a Certificate from the International and Comparative Law program in 2000. While attending Chicago Kent, she served as the law student delegate of Project Bosnia where she traveled to Sarajevo, Bosnia to assist with the installation of an Internet system in the Bosnian Ministry of Justice for members of the Bosnian legal community as well as met with Bosnian officials to discuss development of legal precedent.

From 1999-2000, Michele served on the board of the International Law Student Association as the Director of the International Law Career Conference at Chicago Kent College of Law.

Ms. Katz received a B.A. in Psychology and Jewish Studies, with honors, as well as minors in French, Hebrew, and History from Indiana University in 1997. During that time, she spent one year at the Hebrew University of Jerusalem on Mount

Scopus, and was enrolled in a summer study program at L'Université de Bourgogne in Dijon, France.

Memberships/Associations

American Bar Association
Chicago Bar Association
The Decalogue Society of Lawyers
Illinois Bar Association
National Association of Women Business Owners
Pharmaceutical Trade Mark Group
International Trademark Association
Women's Bar Association

Representative Work

Patent Case: Daiichi Sankyo v. Apotex, Inc.

Publications

Protecting Computer Software

Introduction To Trademark Law: Protect Your Brand Identity And Reputation

Introduction to Copyright Law: Seeking Protection for Your Work

W&K News Articles

Welsh & Katz Announces New Principals and the Addition of Four New Associates

NAWBO Chicago Selects Welsh & Katz Top Corporate Partner

Welsh & Katz, Ltd. Receives Award From The National Association of Hispanic Publications Foundation (NHP Foundation)



© 2007 Welsh & Katz, Ltd. All rights reserved. | Legal Disclaimer | Site Design: DoubleTake Design | Site Hosting: FirmWise Platform

EXHIBIT T

'399 Patent

OIPE AUG 16 2002 PATENT & TRADEMARK OFFICE

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Box ISSUE FEE
Commissioner for Patents
Washington, D.C. 20231
Fax (703)746-4000

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)
24223 7590 08/19/2002

PATTON BOGGS
PO BOX 270930
LOUISVILLE, CO 80027

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above, or being facsimile transmitted to the USPTO, on the date indicated below.

CARL B. FORREST (Depositor's name)
(Signature)
8/16/02 (Date)

09/331,002
APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO.
09/331,002 | 06/14/1999 | MICHAEL TASLER | 2055/101 * | 1119

TITLE OF INVENTION: FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE

*Now 13189.129

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$640	$0	$640	08/19/2002

EXAMINER	ART UNIT	CLASS-SUBCLASS
DU, THUAN N	2185	710-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 Patton Boggs LLP
2
3

2. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Labortechnik Tasler GmbH
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Wuerzburg, Germany

Please check the appropriate assignee category or categories (will not be printed on the patent): ☒ individual ☐ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:
☒ Issue Fee $640.00
☐ Publication Fee
☒ Advance Order - # of Copies Ten (10) 30.00
$670.00

4b. Payment of Fee(s):
☐ A check in the amount of the fee(s) is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 501946 (enclose an extra copy of this form).

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature) 8/16/02 (Date)

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

08/19/2002 BNGUYEN 00000004 501946 09331002
01 FC:242 640.00 CH
02 FC:1463 30.00 CH

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMIT THIS FORM WITH FEE(S)

PTO/SB/31 (REV. 04-03) Approved for use through 07/31/2006. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Received from <3033791155> at 8/16/02 8:12:16 PM [Eastern Daylight Time]

118

Declaration and Power of Attorney For Patent Application
Erklärung Für Patentanmeldungen Mit Vollmacht
German Language Declaration

COPY

Als nachstehend benannter Erfinder erkläre ich hiermit an Eides Statt:

dass mein Wohnsitz, meine Postanschrift, und meine Staatsangehörigkeit den im Nachstehenden nach meinem Namen aufgeführten Angaben entsprechen,

dass ich, nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder (falls nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin, für den dieser Antrag gestellt wird und für den ein Patent beantragt wird für die Erfindung mit dem Titel:

_____

_____

_____

deren Beschreibung

(zutreffendes ankreuzen)

☐ hier beigefügt ist.

☐ am _____ unter der Anmeldungsseriennummer _____ eingereicht wurde und am _____ abgeändert wurde (falls tatsächlich abgeändert).

Ich bestätige hiermit, dass ich den Inhalt der obigen Patentanmeldung einschliesslich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

Ich erkenne meine Pflicht zur Offenbarung irgendwelcher Informationen, die für die Prüfung der vorliegenden Anmeldung in Einklang mit Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit sind, an.

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäss Abschnitt 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 119 aller unten angegebenen Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde, und habe auch alle Auslandsanmeldungen für ein Patent oder eine Erfindersurkunde nachstehend gekennzeichnet, die ein Anmeldedatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Flexible Interface

_____

_____

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on _____ as Application Serial No. _____ and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Form PTO-FB-240 (8-83) Patent and Trademark Office-U.S. DEPARTMENT OF COMMERCE

BEST AVAILABLE COPY

German Language Declaration

COPY

Prior foreign applications
Priorität beansprucht

Priority Claimed

(Number) (Nummer)	(Country) (Land)	(Day/Month/Year Filed) (Tag/Monat/Jahr eingereicht)	Yes Ja	No Nein
19708755.8	Germany	04/3/97 (March 4, 1997)	[X]	[ ]
PCT/EP98/01187	Germany	03/03/98 (March 3, 1998)	[X]	[ ]
			[ ]	[ ]

Ich beanspruche hiermit gemäss Absatz 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgeführten Anmeldungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer früheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 112 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmeldung bekannt geworden sind.

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.) (Anmeldeseriennummer)	(Filing Date) (Anmeldedatum)	(Status) (patentiert, anhängig, aufgegeben)	(Status) (patented, pending, abandoned)

Ich erkläre hiermit, dass alle von mir in der vorliegenden Erklärung gemachten Angaben nach meinem besten Wissen und Gewissen der vollen Wahrheit entsprechen, und dass ich diese eidesstattliche Erklärung in Kenntnis dessen abgebe, dass wissentlich und vorsätzlich falsche Angaben gemäss Paragraph 1001, Absatz 18 der Zivilprozessordnung der Vereinigten Staaten von Amerika mit Geldstrafe belegt und/oder Gefängnis bestraft werden koennen, und dass derartig wissentlich und vorsätzlich falsche Angaben die Gültigkeit der vorliegenden Patentanmeldung oder eines darauf erteilten Patentes gefährden können.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

BEST AVAILABLE COPY

German Language Declaration

COPY

VERTRETUNGSVOLLMACHT: Als benannter Erfinder beauftrage ich hiermit den nachstehend benannten Patentanwalt (oder die nachstehend benannten Patentanwälte) und/oder Patent-Agenten mit der Verfolgung der vorliegenden Patentanmeldung sowie mit der Abwicklung aller damit verbundenen Geschäfte vor dem Patent-und Warenzeichenamt: *(Name und Registrationsnummer anführen)*

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

Donald M. Duft	17,484	William P. Wilbar	43,265
James M. Graziano	28,300	Thomas Swenson	36,696
Carl A. Forest	28,494	Curtis A. Vock	38,356
Dan Cleveland, Jr.	36,106	Kirk D. Williams	42,229
Michael J. Setter	37,936	Steven W. Weinrieb	26,520

Telefongespräche bitte richten an: *(Name und Telefonnummer)*

Direct Telephone Calls to: *(name and telephone number)*

Postanschrift:

Send Correspondence to:
Carl A. Forest, Ph.D.
c/o DUFT, GRAZIANO & FOREST, P.C.
1790-30th Street
- Suite 140 -
Boulder, Colorado 80301-1018, U.S.A.

Voller Name des einzigen oder ursprünglichen Erfinders:	Full name of sole or first inventor: Michael TASLER
Unterschrift des Erfinders Datum	Inventor's signature Michael Tasler Date April 27, 1999
Wohnsitz	Residence Würzburg, Germany
Staatsangehörigkeit	Citizenship German
Postanschrift	Post Office Address Cronthalstraße 6c
	D-97074 Würzburg, Germany
Voller Name des zweiten Miterfinders (falls zutreffend)	Full name of second joint inventor, if any
Unterschrift des Erfinders Datum	Second inventor's signature Date
Wohnsitz	Residence
Staatsangehörigkeit	Citizenship
Postanschrift	Post Office Address

(Bitte entsprechende Informationen und Unterschriften im Falle von dritten und weiteren Miterfindern angeben).

(Supply similar information and signature for third and subsequent joint inventors.)

Form PTO-FB-240 (8-83) Patent and Trademark Office-U.S. DEPARTMENT OF COMMERCE

BEST AVAILABLE COPY

COPY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Michael Tasler, et al. Docket No. SCHO0102D
Serial No.: 10/219,105 Group Art Unit: Unassigned
Filed: 08/15/2002 Examiner: Unassigned
Title: Flexible Interface for Communication Between a Host and an Analog I/O Device Connected to the Interface...

Revocation of Prior and Grant of New Power of Attorney

As Assignee of record of the entire interest of the above-identified patents, all powers of attorney previously given are hereby revoked and the following attorneys and agents are hereby appointed to prosecute and transact all business in the U.S. Patent and Trademark Office connected therewith.

MICHAEL A. GLENN, Reg. No. 30,176
DONALD M. HENDRICKS, Reg. No. 40,355
KIRK WONG, Reg. No. 43,284
CHRISTOPHER PEIL, Reg. No. 45,005
JULIA THOMAS, Reg. No. 52,283

Please send all correspondence for this application as follows:

GLENN PATENT GROUP
3475 Edison Way, Suite L
Menlo Park, CA 94025
Please direct any calls to 650-474-8400.

Please change the Attorney Docket No. to SCHO0102D.

In accordance with 37 CFR 3.73, the assignee hereby certifies that the evidentiary documents with respect to its ownership have been reviewed and that, to the best of assignee's knowledge and belief, title is in the assignee seeking to take this action.

01/10/2003 Michael Tasler
Date Name: Michael Tasler
Title:

BEST AVAILABLE COPY

EXHIBIT U

'449 Patent

PH

AUG 17 2004 PATENT & TRADEMARK OFFICE

08/17/2004 TUE 15:20 FAX [redacted] 474 8401 GLENN PATENT GROUP 004/008

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (703) 746-4000

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by: (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

1420 7590 08/17/2004
PATTON BOGGS
1660 LINCOLN ST
SUITE 1650
DENVER, CO 80264

Glenn Patent Group
3475 Edison Way
Suite 1,
Menlo Park, CA 94025

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO, on the date indicated below.

Rhonda Dunn (Depositor's name)
Rhonda Dunn (Signature)
Aug. 17, 2004 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/219,105	08/15/2002	Michael Tasler	[illegible] SCHOOLCRAFT	6047

TITLE OF INVENTION: FLEXIBLE INTERFACE FOR COMMUNICATION BETWEEN A HOST AND AN ANALOG I/O DEVICE CONNECTED TO THE INTERFACE REGARDLESS THE TYPE OF THE I/O DEVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$665	$300	$965	08/25/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
KIM, HAROLD J	2181	710-018000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 Glenn Patent Group
2 Michael A. Glenn
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)
PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.
(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)
Labortechnik Tasler GMBH Wuerzburg, Germany

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:
☐ Issue Fee
☐ Publication Fee
☒ Advance Order - # of Copies 10

4b. Payment of Fee(s):
☐ A check in the amount of the fee(s) is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 07-2347 (enclose an extra copy of this form).

Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature) (Date)
Michael A. Glenn, Reg. No. 30,176 8/17/04

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 3.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

08/18/2004 LHENDTH2 00000159 071445 10219105
01 FC:2501 665.00 DA
02 FC:1504 300.00 DA
03 FC:8001 30.00 DA

TRANSMIT THIS FORM WITH FEE(S)

PTOL-85 (Rev. 11/03) Approved for use through 04/30/2004. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

EXHIBIT V

'778 Application

PAGE 1/5 * RCVD AT 3/15/2006 4:55:07 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/17 * DNIS:2730300 * CSID:312 655 1502 * DURATION (mm-ss):01-48

RECEIVED
CENTRAL FAX CENTER

MAR 15 2006

WELSH & KATZ, LTD.
120 South Riverside Plaza
22nd Floor
Chicago, Illinois 60606
Phone (312) 655-1500
Facsimile Number (312) 655-1501

FACSIMILE COVER SHEET

From: Jeffrey W. Salmon, Esq. Date: March 15, 2006

To: Group 2161
Commissioner for Patents
UNITED STATES PATENT & TRADEMARK OFFICE
Washington, D.C. 20231

Fax: (571) 273-8300

BEST AVAILABLE COPY

Number of pages including this cover letter: 5

COMMENTS:

File No. 9576/66908.09/10

Items being filed via this facsimile are listed below:

- Transmittal Letter (1 Page)
- Executed Revocation of Power of Attorney with New Power of Attorney, Change of Correspondence Address, and Statement Under 37 C.F.R. 3.73(b) (2 Pages)

IF YOU DO NOT RECEIVE ALL PAGES OR ARE HAVING TROUBLE, PLEASE CALL IMMEDIATELY (312) 655-1500 AND ASK FOR Maura Halvey

******** CONFIDENTIALITY NOTICE ********

The documents accompanying this facsimile transmission contain information which may be confidential or privileged and exempt from disclosure under applicable law. The information is intended to be for the use of the individual or entity named on this transmission sheet. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the contents of this information is without authorization and is prohibited. If you have received this facsimile in error, please notify us by collect telephone immediately so that we can arrange for the retrieval of the original documents at no cost to you.

MAR. 15. 2006 3:55PM WELSH & KATZ LTD. 312 655 1502 NO. 1073 P. 1

PAGE 2/5 * RCVD AT 3/15/2006 4:55:07 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/17 * DNIS:2738300 * CSID:312 655 1502 * DURATION (mm-ss):01-48

TRANSMITTAL LETTER (General - Patent Pending)	RECEIVED CENTRAL FAX CENTER MAR 15 2006	Docket No. 9576/96910

In Re Application Of: **Michael Tasler**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
11/078,778	03/11/2005	Harold J. Kim	24728	2181	8978

Title: **Flexible Interface**

COMMISSIONER FOR PATENTS:

Transmitted herewith is:

Executed Revocation of Power of Attorney With New Power of Attorney, Change of Correspondence Address, and Statement of Under 37 C.F.R. 3.73(b)

In the above identified application.

- ☒ No additional fee is required.
- ☐ A check in the amount of is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 23-0920 as described below.
  - ☐ Charge the amount of
  - ☑ Credit any overpayment.
  - ☑ Charge any additional fee required.
- ☐ Payment by credit card. Form PTO-2038 is attached.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

Jeffrey W. Delmar
Signature

Dated: 15 March 2006

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on

3/15/06 via facsimile (571) 273-8300
(Date)

Signature of Person Mailing Correspondence

Maura Halvey

Typed or Printed Name of Person Mailing Correspondence

cc:

PTO/SB/21(09-04)

MAR. 15. 2006 3:56PM WELSH & KATZ LTD. 312 655 1502 NO. 1073 P. 2

PAGE 3/5 * RCVD AT 3/15/2006 3:55:07 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/17 * DNIS:2738300 * CSID:312 655 1502 * DURATION (mm-ss):01-48

RECEIVED
CENTRAL FAX CENTER
MAR 15 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

U.S. Application Number:	11/078,778
Filing Date:	Mar. 11, 2005
First Named Inventor:	Michael Tasler, Wurzburg (DE)
Title of Invention:	Flexible Interface
Art Unit:	2181
Examiner Name:	Kim, Harold J
Attorney Docket Number:	9576/96910

REVOCATION OF POWER OF ATTORNEY WITH NEW POWER OF ATTORNEY, CHANGE OF CORRESPONDENCE ADDRESS, AND STATEMENT UNDER 37 C.F.R. 3.73(b)

1. Papst Licensing GmbH & Co. KG hereby revokes all previous powers of attorney given in the above-identified application.

2. Papst Licensing GmbH & Co. KG hereby appoints the Practitioners named below as its attorneys or agents to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Name	Registration Number
Jeffrey W. Salmon	37,435
Richard L. Wood	22,839
Joseph R. Marcus	25,060
Gerald T. Shekleton	27,466
Edward P. Gamson, Ph.D.	29,381
Kathleen A. Rheintgen	34,044
Eric D. Cohen	38,110
John P. Christensen	34,137
Louise T. Walsh	45,195
Paul M. Vargo, Ph.D.	29,116
Richard J. Gurak	41,050
Daniel M. Gurfinkel	24,177

3. Please change the correspondence address for the above-identified patent to:

MAR. 15. 2006 3:56PM WELSH & KATZ LTD. 312 655 1502 NO. 1073 P. 3

PAGE 4/5 * RCVD AT 3/15/2006 4:55:07 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/17 * DNIS:2738300 * CSID:312 655 1502 * DURATION (mm-ss):01-48

Jeffrey W. Salmon, Esq.
Welsh & Katz, Ltd.
120 S. Riverside Plaza, 22nd Floor
Chicago IL, 60606 USA
Telephone: (312) 655-1500
Facsimile: (312) 655-1501
Email: jwsalmon@welshkatz.com

4. Papst Licensing GmbH & Co. KG, a German Corporation, is the assignee of the entire right, title and interest the above-captioned patent by virtue of a chain of title from the inventor as set forth hereafter:

(a) From: Michael Tasler to Labortechnik Tasler GmbH. The assignment document was recorded in the Patent and Trademark Office on July 23, 2001 at reel/frame no. 012023/0515.

(b) From: Labortechnik Tasler GmbH to Papst Licensing GmbH & Co KG. A copy of this assignment is attached as Exhibit A hereto and, by separate filing, is being submitted to the U.S. Patent & Trademark Office for recordation.

5. I have reviewed all of the documents in the chain of title to this application and, to the best of my knowledge and belief, title is in Papst Licensing GmbH & Co. KG.

6. I aver that I am empowered to sign this document on behalf of Papst Licensing GmbH & Co. KG.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made upon information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Papst Licensing GmbH & Co. KG

By: L. Parm

Title: PRESIDENT

Date: March 8, 2006

MAR. 15. 2006 3:56PM WELSH & KATZ LTD. 312 655 1502 NO. 1073 P. 4

PAGE 5/5 * RCVD AT 3/15/2006 4:55:07 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-2/17 * DNIS:2738300 * CSID:312 655 1502 * DURATION (mm-ss):01-48

ASSIGNMENT

WHEREAS, LTT Labortechnik Tasler GmbH, is a corporation of Germany, has a P.O. address of Friedrich-Bergius-Ring 15, 97076 Würzburg, Germany, ("Assignor") and is the owner of the entire right, title, and interest in and to: United States Patent No. 6,470,399 B1, United States Patent No. 6,895,449 B2, and United States Patent Application No. 11/078,778 (hereinafter "Patent Rights").

WHEREAS, Papst Licensing GmbH & Co. KG, a German Corporation, having its principal place of business at Bahnhofstrasse 33, 78112 St. Georgen, Germany ("Assignee"), is desirous of acquiring the entire interest in and to the Patent Rights.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and in consideration of the covenants and obligations hereinafter set forth to be well and truly performed, the parties hereby agree as follows.

1. Assignor hereby, sells, assigns, and transfers to Assignee, its lawful successors and assigns, Assignor's entire right, title and interest in and to the Patent Rights. Assignee hereby shall take, acquire and hold such right, title and interest in and to the Patent Rights.

2. Assignor hereby furthermore sells, assigns, and transfers to Assignee all claims for past, present, and future infringement of the inventions covered by Patent Rights, including without limitation all rights to recover damages and the right to grant releases for past infringement of the Patent Rights.

3. Assignor hereby further covenants and agrees, to render such assistance to Assignee as may be necessary to perfect the title to Patent Rights in said Assignee, its successors and assigns, to enable Assignee to prosecute all divisional, continuation, reexamination, and reissue applications, and to enable Assignee to obtain and enforce proper patent protection for the Patent Rights.

4. Assignor hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

5. Assignor further covenants that (i) Assignee will, upon its request, be provided promptly with all pertinent facts and documents relating to the Patent Rights as may be known and/or accessible to Assignor, (ii) Assignor shall testify as to the same in any interference or litigation related thereto, and (iii) Assignor shall promptly execute and deliver to Assignee or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain or enforce the Patent Rights and/or any U.S. patent rights evolving therefrom. Assignor shall use his best efforts to cooperate in good faith with Assignee.

LTT Labortechnik Tasler GmbH

By: [signature]

Title: General Manager

Date: March 8, 2006

Papst Licensing GmbH & Co. KG

By: [signature]

Title: PRESIDENT

Date: March. 8. 2006

Exhibit A

MAR. 15. 2006 3:56PM WELSH & KATZ LTD. 312 655 1502 NO. 1073 P. 5

7/31/06
11/078,778
Application

OCT. 27. 2006 10:42AM WELSH & KATZ NO. 0449 P. 2

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Issue, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

7590 07/28/2006

Jeffrey W. Salmon, Esq.
Welsh & Katz, Ltd.
22nd Floor
120 S. Riverside Plaza
Chicago, IL 60606

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Laura Halvey (Depositor's name)
(Signature)
October 27, 2006 (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/078,778	03/11/2005	Michael Taylor	9576/96910	8978

TITLE OF INVENTION: ANALOG DATA GENERATING AND PROCESSING DEVICE FOR USE WITH A PERSONAL COMPUTER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$700	$300	$0	$1000	10/30/2006

EXAMINER	ART UNIT	CLASS-SUBCLASS
KIM, HAROLD J	2181	710-015000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 WELSH & KATZ, LTD.
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Papst Licensing GmbH & Co. KG
(B) RESIDENCE: (CITY and STATE OR COUNTRY): St. Georgen, GERMANY

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 230920 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)
☒ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Jeffrey W. Salmon Date 10/27/06
Typed or printed name Jeffrey W. Salmon Registration No. 37,435

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PAGE 2/2 * RCVD AT 10/27/2006 11:39:57 AM [Eastern]

07/31/2006	00001704	4	1501	$1,400.00	07/31/2006
07/31/2006	00001705	4	1504	$300.00	07/31/2006

EXHIBIT W

PATTON BOGGS LLP
ATTORNEYS AT LAW
www.pattonboggs.com



CARL A. FOREST, PH.D.
Partner

Intellectual Property
Telecommunications and Technology

1801 California Street
Suite 4900
Denver, Colorado 80202
T: 303-894-6114 F: 303-894-9239
cforest@pattonboggs.com

Carl Forest helps clients efficiently navigate the sometimes treacherous waters of intellectual property. He uses vast experience in law, an understanding of people, and a deep knowledge of technology to develop effective business solutions to intellectual property problems. Having negotiated hundreds of agreements over thirty years in practice, his first priority in any matter is to find a positive, innovative solution. A tenacious litigator, Dr. Forest encourages cooperation; as a scientist, he focuses on bringing new ideas into commercial reality.

Dr. Forest has extensive experience inside and outside large corporations, such as Black and Decker, Bristol-Myers Squibb, Matsushita (Panasonic), and Medtronic and as counsel to start-ups, such as Symetrix Corporation, Sundew Technologies, Inc., A4S Technologies, Inc., and HX LifeSpace, Inc. Before becoming an attorney, he worked in theoretical physics at Michigan State University, built an electro-optics laboratory at the University of Idaho, and taught physics for non-scientists and graduate-level students. His first technical position was as an aerospace engineer for NASA. His life is about bringing new ideas into commercial reality.

Dr. Forest also writes patent applications, particularly in semiconductors and optics. He is without peer in writing broad claims, but understands that it is sometimes better to laser cut a claim to fit a client's business needs and budgetary constraints, particularly when working with startups. His understanding of patent and trademark offices and record of success on appeal translate to particularly effective patent and trademark prosecution strategies. Dr. Forest's work also involves international corporations and foreign patent and trademark matters.

Representative Matters:

- *Particle Measuring Systems, Inc v. Rion Co. Ltd et al.*, US District Court for the District of Colorado, 2001; *Baby's Benefit, Inc., v. SpaceLabs, Inc.*, U.S. District Court for the District of Colorado, 1995; *Medtronic, Inc. v. Daig, Inc.*, U.S. District Court for the District of Minnesota, 1983; *Dynamet Technology, Inc. V. Dynamet Incorporated*, Trademark Trial and Appeal Board, 1977.
- Co-wrote *Amicus* Brief to the Federal Circuit Court of Appeals in *In Re: Beauregard*, in which the Federal Circuit held that software was

Education

- Boston University School of Law, J.D., 1977
- Michigan State University, Ph.D., 1967
- University of Detroit, B.S., *magna cum laude*, 1962

Bar Admissions

- Colorado
- Idaho
- Indiana
- Massachusetts

Court Admissions

- U.S. Supreme Court
- U.S. Court of Appeals for the 7th, 10th and Federal Circuits
- U.S. Patent and Trademark Office
- Colorado District Court
- Indiana Southern District Court

Awards and Honors

- Recognized, Colorado Super Lawyers, 2007
- Recognized, Colorado Super Lawyers (inaugural list)

- American Jurisprudence Award for Torts
- National Science Foundation Fellowship
- Detroit Edison Scholarship

patentable. Written, prosecuted and obtained more than 500 U.S. patents, and filed and obtained more than 200 U.S. trademark registrations. He has filed and obtained thousands of patents and trademarks for clients in more than twenty foreign countries.

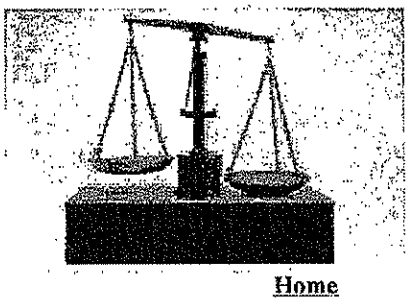
Professional Affiliations:
Colorado Bar Association; Patent, Trademark Copyright Section
American Bar Association; Intellectual Property Law Section
American Physical Society

ARTICLES

- Frequent speaker on protecting and utilizing intellectual property
- "Investing in Technology Startups," *The Denver Business Journal*; (July 2003)
- "Effect of Plasma and Hole Current on the Optical Absorption of InSb," *Solid State Communications*, Vol. 10, No. 1, pp.111-114; (January 1972)
- "Current-Induced Reflectivity Effects in a Semiconductor", *The Physical Review*, Vol. 1, No. 8, pp. 3347-50, (April 1970)
- "Effects of Current Flow on the Optical Absorption of a Semiconductor," *The Physical Review*, Vol. 173, No. 3, 746-754; (September 1968)

EXHIBIT X

KAPLAN GILMAN GIBSON & DERNIER L.L.P.



Home
Firm Overview
Attorney Profile
Contact Us
Directions
Intellectual Property Newsletter

Matthew B. Dernier
Leslie S. Garmaise
Timothy X. Gibson
Michael R. Gilman
Jeffrey I. Kaplan
Joseph B. Lerch
Margaret Przenicki

900 Route 9 North
Woodbridge, New Jersey 07095
Telephone:
www.lawyers.com/kaplangilman

This web site is designed for general information only. The information presented at this site should not be construed to be formal legal advice nor the formation of a lawyer/client relationship.

Kaplan Gilman Gibson & Dernier L.L.P. website is powered by LexisNexis Martindale-Hubbell.

EXHIBIT Y

Michael Glenn

Our founder is a natural to the field of patent law. Michael gained experience in electrical engineering at GTE Lenkurt and Ampex Corporation. At Townsend & Townsend, Michael counseled clients in all aspects of intellectual property law. As Intel Corporation's first Patent Counsel, Michael was Intel's "substantive intellectual property law expert."



Michael served as Senior Counsel for both National Semiconductor Corporation and Digital Equipment Corporation. He is rated AV by Martindale-Hubbell, the highest rating possible. In addition to his practice here at the Glenn Patent Group, Michael is an adjunct professor at Golden Gate University School of Law in San Francisco, and past chair of the California State Bar Intellectual Property Section.

Back to Company Overview

Copyright ©2002 by Glenn Patent Group. All rights reserved.

Contact Us

3475 Edison Way, Suite L
Menlo Park, CA 94025
Phone: 650.474.8400
Fax: 650.474.8401
info@glenn-law.com

Driving Directions

101 South
Exit Marsh Road/Atherton
Right on Marsh Road towards Atherton
Right on Fair Oaks, Fair Oaks runs into Edison
Cross Edison straight into parking lot
We are at the back of the building, on the right side

101 North
Exit Marsh Road/Atherton
Left on Marsh Road over the freeway towards Atherton
Right on Fair Oaks, Fair Oaks runs into Edison
Cross Edison straight into parking lot
We are at the back of the building, on the right side

280 South
Exit 84/Woodside Road (Redwood City/Atherton)
Left onto Woodside Road
Go about 3 miles, then turn Right on Middlefield
Go Left on 5th Street
Right on Edison
Ours is the 6th building on the left side
We are at the back of the building, on the right side

280 North
Exit 84 Woodside East towards Redwood City/Atherton
Right on Woodside Road
Go about 3 miles, then turn Right on Middlefield
Go Left on 5th Street
Right on Edison
Ours is the 6th building on the left side
We are at the back of the building, on the right side