

In the Matter of

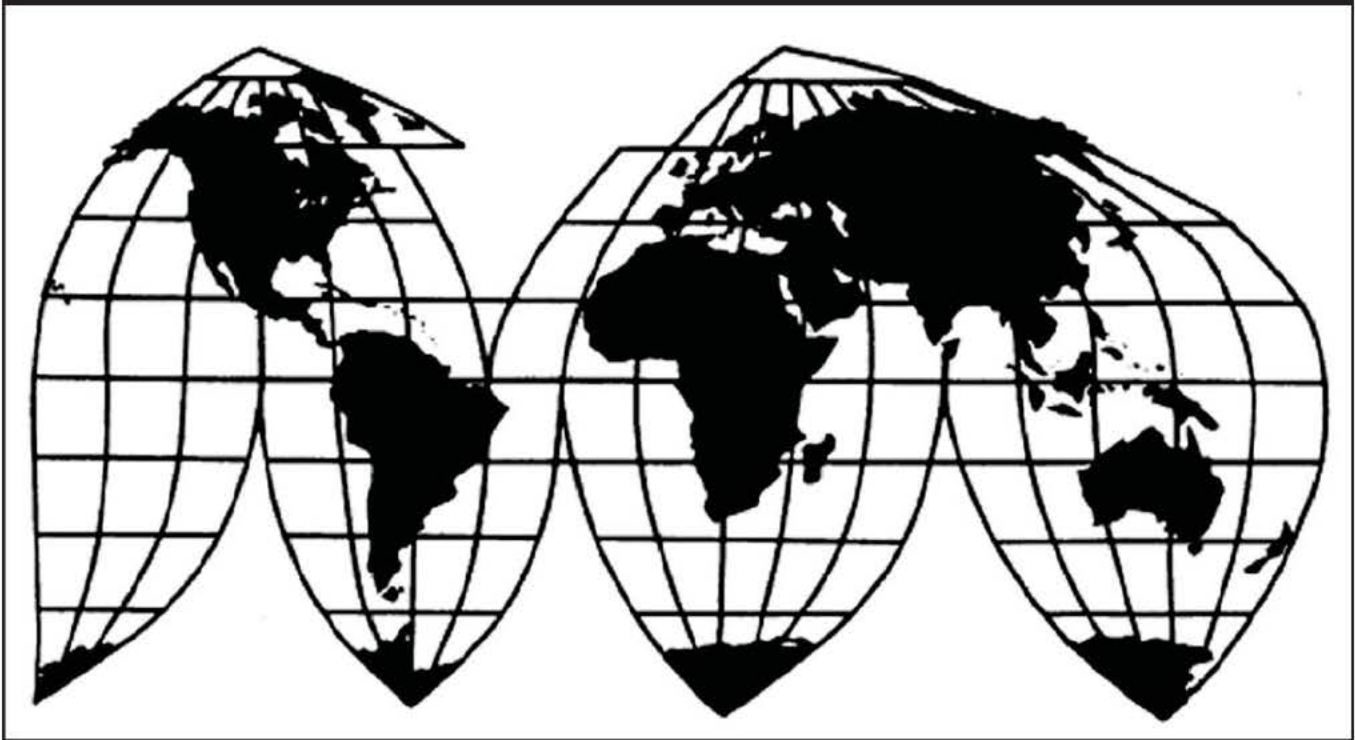
**CERTAIN INKJET INK CARTRIDGES
WITH PRINTHEADS AND COMPONENTS
THEREOF**

Investigation No. 337-TA-723

Publication 4373

February 2013

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN INKJET INK CARTRIDGES
WITH PRINTHEADS AND COMPONENTS
THEREOF**

Investigation No. 337-TA-723

**NOTICE OF THE COMMISSION'S FINAL DETERMINATION FINDING A
VIOLATION OF SECTION 337; ISSUANCE OF A GENERAL EXCLUSION ORDER;
AND TERMINATION OF THE INVESTIGATION**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has found a violation of section 337 in this investigation and has issued a general exclusion order prohibiting importation of infringing inkjet ink cartridges with printheads and components thereof.

FOR FURTHER INFORMATION CONTACT: Panyin A. Hughes, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-3042. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <http://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on June 25, 2010, based on a complaint filed by Hewlett-Packard Company of Palo Alto, California and Hewlett-Packard Development Company, L.P., of Houston, Texas (collectively "HP"). 75 *Fed. Reg.* 36442 (June 25, 2010). The complaint alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof by reason of infringement of various claims of United States Patent Nos. 6,234,598 ("the '598 patent"); 6,309,053 ("the '053 patent"); 6,398,347 ("the '347 patent"); 6,481,817 ("the '817 patent"); 6,402,279 ("the '279 patent"); and 6,412,917 ("the '917 patent"). The '917 patent was subsequently terminated from the investigation. The complaint named the following entities as respondents: MicroJet Technology Co., Ltd. of Hsinchu City, Taiwan

("MicroJet"); and Asia Pacific Microsystems, Inc. of Hsinchu City, Taiwan ("APM"); Mipo Technology Limited of Kowloon, Hong Kong ("Mipo Tech."); Mipo Science & Technology Co., Ltd. of Guangzhou, China ("Mipo"); Mextec d/b/a Mipo America Ltd. of Miami, Florida ("Mextec"); SinoTime Technologies, Inc. d/b/a All Colors of Miami, Florida ("SinoTime"); and PTC Holdings Limited of Kowloon, Hong Kong ("PTC").

Respondents Mipo, Mipo Tech., SinoTime, and Mextec were subsequently terminated from the investigation. Respondent MicroJet defaulted. Respondent PTC did not participate in the hearing and failed to file post-hearing briefs. Pursuant to 19 C.F.R. §§ 210.17(d) and (e), the ALJ drew an adverse inference against PTC that "PTC imported accused products into the United States, that those products were manufactured by MicroJet, and that those products contain ICs [integrated circuits] made by APM." Final Initial Determination ("ID") at 29.

On June 10, 2011, the Administrative Law Judge ("ALJ") issued his final ID, finding a violation of section 337 by the respondents. Specifically, the ALJ found that the Commission has subject matter jurisdiction: *in rem jurisdiction* over the accused products and *in personam* jurisdiction over APM. The ALJ also found that there has been an importation into the United States, sale for importation, or sale within the United States after importation of the accused inkjet ink cartridges with printheads and components thereof. Regarding infringement, the ALJ found that MicroJet and PTC directly infringe claims 1-6 and 8-10 of the '598 patent; claims 1-6 and 8-17 of the '053 patent; claims 1, 3-5, and 8-12 of the '347 patent; claims 1-14 of the '817 patent; and claims 9-15 of the '279 patent. The ALJ also found that MicroJet induces infringement of those claims. The ALJ further found that APM does not directly infringe the asserted claims of the '598 and does not induce infringement of the asserted patents. The ALJ, however, found APM liable for contributory infringement. With respect to invalidity, the ALJ found that the asserted patents were not invalid. Finally, the ALJ concluded that an industry exists within the United States that practices the '598, '053, '347, '817, and '279 patents as required by 19 U.S.C. § 1337(a)(2).

On June 24, 2011, HP filed a contingent petition for review of the ID. On June 27, 2011, APM and the Commission investigative attorney filed petitions for review of the ID. On July 5, 2011, the parties filed responses to the various petitions and contingent petition for review.

On August 11, 2011, the Commission determined to review a single issue in the final ID and requested briefing on the issue it determined to review, and on remedy, the public interest and bonding. 76 *Fed. Reg.* 51055 (Aug. 17, 2011). Specifically, the Commission determined to review the finding that HP failed to establish by a preponderance of the evidence that Respondent APM induced infringement of the asserted patents.

On August 25, 2011, the parties filed written submissions on the issue under review, remedy, the public interest, and bonding. On September 1, 2011, the parties filed reply submissions. Although Respondent PTC failed to appear at the hearing and failed to file post-hearing briefs, resulting in the ALJ drawing an adverse inference against PTC (ID at 29), PTC filed a letter dated August 24, 2011, responding to the issue under review. However, by failing to file a post-hearing brief, PTC has waived any arguments it has or may have had about any


issues in this investigation. *See* Order No. 2, Ground Rule 11.1. Accordingly, the Commission declines to consider PTC's submission.

Having examined the record of this investigation, including the ALJ's final ID, the Commission has determined that there is a violation of section 337. The Commission has determined to reverse the ALJ's finding that HP failed to establish by a preponderance of the evidence that Respondent APM induced infringement of the asserted patents, and finds that HP established by a preponderance of the evidence that APM induced infringement of the asserted patents. The Commission adopts the ALJ's findings in all other respects.

The Commission has further determined that the appropriate remedy is a general exclusion order prohibiting the entry of inkjet ink cartridges with printheads and components thereof that infringe any of the asserted claims. The Commission has also determined that the public interest factors enumerated in section 337(d) (19 U.S.C. §§ 1337(d)) do not preclude issuance of the general exclusion order. Finally, the Commission has determined that a bond of 100 percent of the entered value is required to permit temporary importation during the period of Presidential review (19 U.S.C. § 1337(j)) of inkjet ink cartridges with printheads and components thereof that are subject to the order. The Commission's order and opinion were delivered to the President and to the United States Trade Representative on the day of their issuance.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, and in sections 210.42-46 and 210.50 of the Commission's Rules of Practice and Procedure, 19 C.F.R. §§ 210.42-46, 210.50.

By order of the Commission.


James R. Holbein
Secretary to the Commission

Issued: October 24, 2011

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN INKJET INK CARTRIDGES WITH
PRINTHEADS AND COMPONENTS THEREOF**

Inv. No. 337-TA-723

GENERAL EXCLUSION ORDER

The Commission has determined that there is a violation of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the unlawful importation and sale of certain inkjet ink cartridges with printheads and components thereof that infringe claims 1-6 and 8-10 of United States Patent No. 6,234,598 (“the ’598 patent”); claims 1-6 and 8-17 of United States Patent No. 6,309,053 (“the ’053 patent”); claims 1, 3-5, and 8-12 of United States Patent No. 6,398,347 (“the ’347 patent”); claims 1-14 of United States Patent No. 6,481,817 (“the ’817 patent”); and claims 9-15 of United States Patent No. 6,402,279 (“the ’279 patent”).

Having reviewed the record in this investigation, including the written submissions of the parties, the Commission has made its determinations on the issues of remedy, the public interest, and bonding. The Commission has determined that a general exclusion from entry for consumption is necessary to prevent circumvention of an exclusion order limited to products of named persons. Accordingly, the Commission has determined to issue a general exclusion order prohibiting the unlicensed importation of inkjet ink cartridges with printheads and components thereof.

The Commission has also determined that the public interest factors enumerated in 19 U.S.C. § 1337(d) do not preclude issuance of the general exclusion order, and that there shall be a 100% bond during the period of Presidential review.

Accordingly, the Commission hereby **ORDERS** that:

1. Inkjet ink cartridges with printheads and components thereof that infringe one or more of claims 1-6 and 8-10 of the '598 patent; claims 1-6 and 8-17 of the '053 patent; claims 1, 3-5, and 8-12 of the '347 patent; claims 1-14 of the '817 patent; and claims 9-15 of the '279 patent are excluded from entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, for the remaining terms of the patents, except under license of the patent owner or as provided by law.

2. Notwithstanding paragraph 1 of this Order, the aforesaid inkjet ink cartridges with printheads and components thereof are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, under bond in the amount of 100% of the entered value of the products pursuant to subsection (j) of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337(j), and the Presidential Memorandum for the United States Trade Representative of July 21, 2005 (70 *Fed. Reg.* 43251), from the day after this Order is received by the United States Trade Representative and until such time as the United States Trade Representative notifies the Commission that this Order is approved or disapproved but, in any event, not later than sixty (60) days after the date of receipt of this Order.

3. At the discretion of U.S. Customs and Border Protection ("CBP") and pursuant to procedures it establishes, persons seeking to import inkjet ink cartridges with printheads and components thereof that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made

appropriate inquiry, and thereupon state that, to the best of their knowledge and belief, the products being imported are not excluded from entry under paragraph 1 of this Order. At its discretion, CBP may require persons who have provided the certification described in this paragraph to furnish such records or analyses as are necessary to substantiate the certification.


4. In accordance with 19 U.S.C. § 1337(l), the provisions of this Order shall not apply to inkjet ink cartridges with printheads and components thereof that are imported by and for the use of the United States, or imported for, and to be used for, the United States with the authorization or consent of the Government.

5. The Commission may modify this Order in accordance with the procedures described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

6. The Commission Secretary shall serve copies of this Order upon each party of record in this investigation and upon the Department of Health and Human Services, the Department of Justice, the Federal Trade Commission, and U.S. Customs and Border Protection.

7. Notice of this Order shall be published in the *Federal Register*.

By order of the Commission.



James R. Holbein
Secretary to the Commission

Issued: October 24, 2011

**CERTAIN INKJET INK CARTRIDGES WITH PRINTHEADS 337-TA-723
AND COMPONENTS THEREOF**

CERTIFICATE OF SERVICE

I, James Holbein, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Rett Snotherly, Esq., and the following parties as indicated, on **October 24, 2011**


James Holbein, Secretary
U.S. International Trade Commission
500 E Street, SW
Washington, DC 20436

**On Behalf of Complainants Hewlett-Packard Company
and Hewlett-Packard Development Company, L.P.:**

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**On Behalf of Respondent Asia Pacific
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 Via First Class Mail
 INTERNATIONAL

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**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN INKJET INK CARTRIDGES
WITH PRINTHEADS AND COMPONENTS
THEREOF**

Investigation No. 337-TA-723

COMMISSION OPINION

This investigation is before the Commission for a final determination on the issue under review, remedy, the public interest, and bonding. The Commission has determined to affirm the presiding administrative law judge's ("ALJ") determination that respondents violated section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in connection with claims 1-10 of United States Patent No. 6,234,598 ("the '598 patent"); claims 1-6 and 8-17 of United States Patent No. 6,309,053 ("the '053 patent"); claims 1-6 and 8-12 of United States Patent No. 6,398,347 ("the '347 patent"); claims 1-15 of United States Patent No. 6,481,817 ("the '817 patent"); and claims 9-16 of United States Patent No. 6,402,279 ("the '279 patent"). *See 76 Fed. Reg. 51055* (Aug. 17, 2011). The ALJ found that each respondent, including Asia Pacific Microsystems, Inc. of Hsinchu City, Taiwan ("APM"), violated section 337. The Commission reverses the ALJ's finding that Complainants Hewlett-Packard Company of Palo Alto, California and Hewlett-Packard Development Company, L.P., of Houston, Texas (collectively "HP") failed to establish that APM induced infringement of the asserted patents. The Commission adopts the ALJ's findings in all other respects.

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The Commission issues herewith a general exclusion order prohibiting the entry of unlicensed infringing inkjet ink cartridges with printheads and components thereof for consumption in the United States. The Commission finds that the public interest factors set out in section 337(d) do not preclude issuance of the general exclusion order, and sets a bond of 100 percent of entered value to permit temporary importation of infringing products during the period of Presidential review.

I. BACKGROUND

A. Procedural History

The Commission instituted this investigation on June 25, 2010, based on a complaint filed by HP. 75 *Fed. Reg.* 36442 (June 25, 2010). The complaint alleged violations of section 337 of the Tariff Act of 1930, as amended, (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof by reason of infringement of various claims of the '598 patent, '053 patent, '347 patent, '817 patent, '279 patent, and United States Patent No. 6,412,917 ("the '917 patent"). The complaint named the following entities as respondents: MicroJet Technology Co., Ltd. of Hsinchu City, Taiwan ("MicroJet"); APM; Mipo Technology Limited of Kowloon, Hong Kong ("Mipo Tech."); Mipo Science & Technology Co., Ltd. of Guangzhou, China ("Mipo"); Mextec d/b/a Mipo America Ltd. of Miami, Florida ("Mextec"); SinoTime Technologies, Inc. d/b/a All Colors of Miami, Florida ("SinoTime"); and PTC Holdings Limited of Kowloon, Hong Kong ("PTC").

On September 20, 2010, the ALJ issued an ID finding respondent MicroJet in default

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pursuant to 19 C.F.R. § 210.16(a)(1) for failure to respond to the Complaint and Notice of Investigation. *See* Order No. 9. The Commission determined not to review the ID. *See* Notice of Commission Decision Not to Review an Initial Determination Finding Respondent MicroJet Technology Co., Ltd. in Default (Oct. 19, 2010).

On October 28, 2010, the ALJ issued an ID terminating the investigation as to respondents Mipo and Mipo Tech. on the basis of a consent order. *See* Order No. 16. On November 10, 2010, the ALJ issued IDs terminating the investigation as to respondents SinoTime and Mextec on the basis of settlement agreements. *See* Order Nos. 17, 18. The Commission determined not to review any of those IDs. *See* Notice of Commission Decision Not to Review an Initial Determination Terminating the Investigation With Respect to Respondents Mipo Science & Technology Co., Ltd. and Mipo Technology Limited Based on a Consent Order (Nov. 18, 2010); Notice of Commission Decision Not to Review an Initial Determination Terminating the Investigation in Part Based on a Settlement Agreement (Nov. 29, 2010); Notice of Commission Decision Not to Review an Initial Determination Terminating the Investigation in Part Based on a Settlement Agreement (Nov. 29, 2010).

On January 11, 2011, the ALJ issued IDs granting HP's motions for summary determination that it satisfied the economic prong of the domestic industry requirement and that the '053; '347; '917; '817; and '279 patents are not invalid. *See* Order Nos. 30, 31. The Commission determined not to review those IDs. *See* Notice of Decision Not to Review an Initial Determination Granting a Motion for Summary Determination that Complainants have Established the Economic Prong of the Domestic Industry Requirement (Jan. 31, 2011); Notice

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of Decision Not to Review an Initial Determination Granting a Motion for Summary Determination that Complainants' Asserted Patents Are Not Invalid (Feb. 7, 2011).

On January 27, 2011, the ALJ issued an ID terminating the investigation in part based on withdrawal of the '917 patent. *See* Order No. 36. The Commission determined not to review the ID. *See* Notice of Commission Decision Not to Review the Administrative Law Judge's Initial Determination Granting Complainants' Unopposed Motion to Terminate the Investigation as to U.S. Patent No. 6,412,917 (Feb. 10, 2011).

The ALJ held an evidentiary hearing from March 14, 2011 to March 16, 2011, and thereafter received post-hearing briefing from the parties. Only Respondent APM appeared. Respondent PTC neither appeared at the hearing, nor filed post-hearing briefs. ID at 29. The ALJ therefore drew an adverse inference against PTC, stating that "it is appropriate to draw the adverse inferences that PTC imported accused products into the United States, that those products were manufactured by MicroJet, and that those products contain ICs made by APM." *Id.* (citing 19 C.F.R. §§ 210.17(d), (e)). The ALJ added that "by failing to file a post-hearing brief, PTC waived any arguments that it may have had concerning any issue in this investigation." *Id.* (citing Order No. 2, Ground Rule 11.1).

On June 10, 2011, the ALJ issued his final ID, finding a violation of section 337 by Respondents APM, MicroJet, and PTC. Specifically, the ALJ found that the Commission has subject matter jurisdiction: *in rem* jurisdiction over the accused products and *in personam* jurisdiction over APM. ID at 32-34. The ALJ also found that there has been an importation into the United States, sale for importation, or sale within the United States after importation of the

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accused inkjet ink cartridges with printheads and components thereof. *Id.* at 17-32. Regarding infringement, the ALJ found that MicroJet and PTC directly infringe claims 1-6 and 8-10 of the '598 patent; claims 1-6 and 8-17 of the '053 patent; claims 1, 3-5, and 8-12 of the '347 patent; claims 1-14 of the '817 patent; and claims 9-15 of the '279 patent. *Id.* at 66-70, 92-96. The ALJ also found that MicroJet induces infringement of those claims. *Id.* The ALJ further found that APM does not directly infringe claims 1-5 of the '598 and does not induce infringement of the asserted patents. *Id.* The ALJ, however, found APM liable for contributory infringement of claims 1-6 and 8-10 of the '598 patent. *Id.* With respect to invalidity, the ALJ found that the asserted patents were not invalid. *Id.* at 59-66. Finally, the ALJ concluded that an industry exists within the United States that practices the '598, '053, '347, '817, and '279 patents as required by 19 U.S.C. § 1337(a)(2). *Id.* at 98-104.

The ID included the ALJ's recommended determination ("RD") on remedy and bonding. The ALJ recommended that in the event the Commission finds a violation of section 337, the Commission should issue a general exclusion order directed to inkjet ink cartridges with printheads and components thereof that infringe any of the asserted patents. *Id.* at 111. The ALJ found that HP offered evidence to establish that the named respondents would likely circumvent a limited exclusion order and recommended a general exclusion order under 19 U.S.C. § 1337(d)(2)(A). *Id.* at 113. The ALJ, however, found that HP failed to demonstrate that it is entitled to a general exclusion order under section 337(d)(2)(B) because although HP accused five respondents of violation, "only one of those five respondents actually manufactures the

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infringing cartridges and, therefore, the record evidence does not show ‘a pattern of violation’ of Section 337 that warrants a general exclusion order under Section 337(d)(2)(B).” *Id.* at 115.

Even though the ALJ recommended a general exclusion order, he noted that he did not address the “‘*Spray Pumps* factors,’ and instead focused on the language of the statute.” *Id.* at 112, n.22 (citing *Certain Ground Fault Circuit Interrupters & Products Containing Same*, Inv. No. 337-TA-615, Comm’n Op. at 25 (Mar. 26, 2009)). With respect to the amount of bond that should be posted during the period of presidential review, the ALJ recommended that if the Commission finds a violation of section 337, it should set a bond of 100 percent of the entered value of the imported infringing products.

On June 24, 2011, HP filed a contingent petition for review.¹ *See* Complainants Hewlett-Packard Company and Hewlett-Packard Development Company, L.P.’s Contingent Petition for Review. In the event that the Commission decided to review any part of the ID, HP requested that the Commission review “two narrow issues.” *Id.* at 1. Specifically, HP argued that the ALJ erred in finding that the claim term “printhead” recited in the preamble of asserted claim 1 of the ’598 patent recites a limitation of the claim. *Id.* at 2. Secondly, HP contended that the ALJ’s finding that Respondent APM’s products do not directly infringe asserted claims 1-5 of the ’598 patent based on his construction of “printhead” is in error. *Id.*

On June 27, 2011, APM filed a petition for review of the ID, challenging the ALJ’s finding of contributory infringement and importation into the United States. *See* Asia Pacific

¹ Under the Commission’s Rules, contingent petitions for review are treated as petitions for review. 19 C.F.R. § 210.42(b)(3).

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Microsystems, Inc.'s Petition for Commission Review of the Initial Determination Issued by Hon. ALJ Robert K. Rogers Pursuant to Commission Rule 210.43(a). Specifically, APM argued that "[t]he ALJ erroneously held that even though APM gained the knowledge of HP's patents-in-suit only after the acts of direct infringement had occurred, APM is nonetheless liable for contributory infringement." *Id.* at 3. APM further argued that the ALJ's finding that the accused products do not have substantial non-infringing uses is in error, contending that "the ALJ erred in concluding that the non-infringing uses of the accused inkjet cartridges were irrelevant to the inquiry and that only the non-infringing uses of the accused ICs were relevant." *Id.* at 4. APM also challenged the ALJ's finding that APM sold infringing products for importation into the United States. *Id.* APM stated that the ALJ "erred in concluding that the cartridges imported on HP's direction constituted unauthorized imports for the purposes of providing the Commission with the subject matter jurisdiction over APM's ICs." *Id.*

Also on June 27, 2011, the Commission investigative attorney ("IA") (Rett Snotherly) filed a petition for review of the ID. *See* Petition for Review by the Office of Unfair Import Investigations of the Final Initial Determination. The IA challenged the ALJ's finding that APM did not induce infringement of the asserted patents and stated that "OUII does petition for one nondispositive issue that was decided contrary to recent precedent." *Id.* at 1.

On July 5, 2011, the parties filed responses to the petitions and contingent petition for review. *See* Complainants Hewlett-Packard Company and Hewlett-Packard Development Company, L.P.'s Response to Asia Pacific Microsystems, Inc.'s Petition for Review; Asia Pacific

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Microsystems, Inc.'s Opposition to OUII's Petition for Commission Review of the Initial Determination, Pursuant to Commission on the Issue of Induced Infringement; Asia Pacific Microsystems, Inc.'s Response to Hewlett-Packard Company and Hewlett-Packard Development Company, L.P.'s Contingent Petition for Review; Response of the Office of Unfair Import Investigation to the Petitions for Review Filed by the Private Parties.

On August 11, 2011, the Commission determined to review a single issue in the final ID and requested briefing on the issue it determined to review, and on remedy, the public interest and bonding. *76 Fed. Reg.* 51055 (Aug. 17, 2011). Specifically, the Commission determined to review the finding that HP failed to establish by a preponderance of the evidence that Respondent APM induced infringement of the asserted patents. In its notice of review, the Commission asked the parties the following question:

1. Does the record evidence demonstrate that APM's conduct meets the "specific intent" requirement for inducement in light of the ALJ's finding that "APM certainly had knowledge of the asserted patents and the infringement at issue once it was served with HP's Complaint. And APM continued to sell its components to MicroJet even after receiving HP's Complaint"? ID at 91; RX-69C. *See DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1305 (Fed. Cir. 2006).

On August 25, 2011, the parties filed written submissions on the issue under review, remedy, the public interest, and bonding. *See* Complainants Hewlett-Packard Company and Hewlett-Packard Development Company's Written Submission on the Issues of Inducement, Remedy, the Public Interest, and Bonding ("HP Br."); Brief of the Office of Unfair Import

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Investigations on the Issue Under Review, Remedy, the Public Interest and Bonding (“IA Br.”); Respondent Asia Pacific Microsystems, Inc.’s Submission in Response to Commission’s Decision to Review the Initial Determination in Part and Request for Additional Briefing on Issues of Induced Infringement and Remedy (“APM Br.”).² On September 1, 2011, the parties filed reply briefs.

B. Patents and Technology at Issue

The technology at issue in this investigation is directed to a semiconductor design for inkjet ink cartridges with printheads and associated components. ID at 4-5; HP Pet. at 3. Specifically, the asserted claims are drawn to terminal ground returns and ground buses for the printheads, drive circuitry, and ink ejectors. *Id.*

The ’598 patent, entitled “Shared Multiple Terminal Ground Returns for an Inkjet Printhead,” resulted from an application filed on August 30, 1999. The patent issued on May 22, 2001 and names Joseph M. Torgerson, Rama Prasad, Todd A. Cleland, and Dale R. Oughton as the inventors. JX-1 (’598 patent). The ’598 patent describes an inkjet printing apparatus that has a large number of ink ejectors, and teaches that for such apparatus it is desirable to have as few as possible interconnections to the ink ejectors. ’598 patent, Abstract. In that regard, the patent states that sharing electrical ground returns between related ink ejector primitive groups with

² Although Respondent PTC failed to appear at the hearing and failed to file post-hearing briefs, resulting in the ALJ drawing an adverse inference against PTC (ID at 29), PTC filed a letter dated August 24, 2011, responding to the issue under review. By failing to file a post-hearing brief, PTC waived its arguments about any issue in this investigation. *See* Order No. 2, Ground Rule 11.1. The Commission therefore does not consider PTC’s submission. *See also* 19 C.F.R. § 210.17.

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spaced apart terminals provides a reduction in interconnections while offering redundancy in the interconnection. *Id.* HP owns the patent and has asserted independent claims 1 and 10 together with dependent claims 2-9 in this investigation.

The '053 patent, entitled "Ink Jet Printhead Having a Ground Bus that Overlaps Transistor Active Regions," resulted from an application filed on July 24, 2000. The patent issued on October 30, 2001 and names Joseph M. Torgerson and David M. Hurst as the inventors: JX-2 ('053 patent). The '053 patent describes an inkjet printhead that has a ground bus which partially overlies active regions of FET (field-effect transistors) drive circuits. '053 patent, Abstract. HP owns the patent and has asserted independent claims 1, 8, and 14 together with dependent claims 2-6, 8-13, and 15-17 in this investigation.

The '347 patent, entitled "Energy Balanced Ink Jet Printhead" resulted from an application filed on July 24, 2000. The patent issued on June 4, 2002 and names Joseph M. Torgerson and David M. Hurst as the inventors. JX-3 ('347 patent). The '347 patent describes an inkjet printhead with FET drive circuits that are configured to compensate for power trace parasitic resistances. '347 patent, Abstract. HP owns the patent and has asserted independent claims 1, 3, 5, 8, 10, and 11 together with dependent claims 2, 4, 6, 7, 9, and 12 in this investigation.

The '817 patent, entitled "Method and Apparatus for Ejecting Ink" resulted from an application filed on October 30, 2000. The patent issued on November 19, 2002 and names Joseph M. Torgerson, Bruce Cowger, David M. Hurst, and Mark H. MacKenzie as the inventors. JX-5 ('817 patent). The '817 patent describes an inkjet printhead that has a plurality of drop

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generators responsive to drive current, and address signals for dispensing ink. '817 patent, Abstract. The inkjet printhead includes first and second drop generators disposed on the printhead with each of the first and second drop generators configured to receive drive current from a drive current source. *Id.* Each of the first and second drop generators is configured to receive address signals from a common address source. *Id.* The inkjet printhead further includes a switching device connected between the common address source and each of the first and second drop generators. *Id.* The switching device is responsive to enable signals for selectively providing the address signal to only one of the first and second drop generators. *Id.* HP owns the patent and has asserted independent claims 1, 10, and 14 together with dependent claims 2-9, 11-13, and 15 in this investigation.

The '279 patent, entitled "Inkjet Printhead and Method for the Same" resulted from an application filed on October 30, 2000. The patent issued on June 11, 2002 and names Joseph M. Torgerson, Bruce Cowger, David M. Hurst, and Mark H. MacKenzie as the inventors. JX-6 ('279 patent). The '279 patent describes an inkjet printhead with a plurality of drop generators that selectively eject ink in response to activation. '279 patent, Abstract. The inkjet printhead includes first and second drop generators disposed on the printhead. *Id.* Each of the first and second drop generators are configured for connection to a source of drive current. *Id.* The inkjet printhead also includes a control device configured for connection to a periodic address signal and first and second periodic enable signals. *Id.* The control device is responsive to the first periodic enable signal and periodic address signal for enabling the first drop generator for

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activation in response to drive current. *Id.* The control device is responsive to the second periodic enable signal and periodic address signal for enabling the second drop generator for activation in response to drive current. *Id.* HP owns the patent and has asserted independent claims 9, 13, and 14 together with dependent claims 10-12, 15, and 16 in this investigation.

C. Products at Issue

The accused products include inkjet ink cartridges manufactured and sold by MicroJet, Mipo, Mipo Tech., and PTC, designed to work on HP printers that require a cartridge belonging to the HP 56/57 Family of products. *Id.* at 6. HP refers to such products as “clones” or “HP-compatible” inkjet ink cartridges. *Id.* In addition to the inkjet cartridges, HP accuses APM’s integrated circuits of infringement. *Id.* APM manufactures and sells integrated circuits (“ICs”) that HP alleges are used in the manufacture of the inkjet cartridges. *Id.* HP asserts that the APM ICs are found in the inkjet cartridges manufactured by MicroJet and sold by the Mipo, Mipo Tech., and PTC respondents. *Id.* at 6-7.

II. VIOLATION ISSUE UNDER REVIEW

A. Induced Infringement

The Commission determined to review the ALJ’s finding that HP failed to establish by a preponderance of the evidence that APM induced infringement of the asserted claims.

1. Applicable Law

Section 271(b) of the Patent Act prohibits inducement, stating: “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. § 271(b) (2008). The

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Supreme Court recently stated that “induced infringement under §271(b) requires knowledge that the induced acts constitute patent infringement.” *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S.Ct. 2060, 2068 (2011). The Court, however, explained that actual knowledge of the patent is not required but that a willful blindness to the patent and infringing activity would suffice and described the standard as follows:

While the Courts of Appeals articulate the doctrine of willful blindness in slightly different ways, all appear to agree on two basic requirements: (1) the defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact. We think these requirements give willful blindness an appropriately limited scope that surpasses recklessness and negligence. Under this formulation, a willfully blind defendant is one who takes deliberate actions to avoid confirming a high probability of wrongdoing and who can almost be said to have actually known the critical facts.

Id. at 2070-71. The Supreme Court further stated that “[t]he addition of the adverb ‘actively’ suggests that the inducement must involve the taking of affirmative steps to bring about the desired result.” *Id.* at 2065. As the Federal Circuit explained:

To establish liability under section 271(b), a patent holder must prove that once the defendants knew of the patent, they “actively and knowingly aid[ed] and abett[ed] another’s direct infringement.” However, “knowledge of the acts alleged to constitute infringement” is not enough. The “mere knowledge of possible infringement by others does not amount to inducement; specific intent and action to induce infringement must be proven.”

DSU Med. Corp. v. JMS Co., 471 F.3d 1293, 1305 (Fed. Cir. 2006) (en banc in relevant part) (citations omitted). The Court reiterated its position on this point when it stated:

In *DSU Med. Corp. v. JMS Co.*, this court clarified en banc that the specific intent necessary to induce infringement “requires more than just intent to cause the acts that produce direct infringement.

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Beyond that threshold knowledge, the inducer must have an affirmative intent to cause direct infringement.”

Kyocera Wireless Corp. v. Int’l Trade Comm’n, 545 F.3d 1340, 1354 (Fed. Cir. 2008) (citation omitted). The required specific intent may be proven through circumstantial evidence.

Broadcom Corp. v. Qualcomm Inc., 543 F.3d 683, 699 (Fed. Cir. 2008).

2. The ALJ’s Finding that APM Is Not Liable for Induced Infringement

The ALJ found the evidence insufficient to prove that APM induced infringement of the asserted patents. ID at 77. The ALJ noted his previous finding that the prerequisite direct infringement existed but found that HP failed to offer sufficient evidence of the specific intent needed to establish inducement. *Id.* at 79-80. Regarding an e-mail exchange between two APM employees, [], that HP relied on, the ALJ found that although the emails [], the emails do not identify any specific patents. *Id.* at 80. According to the ALJ, “[t]he only reference to any details [

] and that “HP has not shown that this vague reference demonstrates APM’s knowledge of the asserted patents.” *Id.* The ALJ also found unpersuasive, HP’s argument that APM knew of the asserted patents through its interaction with MicroJet, finding the evidence insufficient to support the argument.

The ALJ further stated that “[e]ven assuming that HP demonstrated that APM had knowledge of the asserted patents prior to this investigation, proof of mere knowledge of the patents is not enough to prove inducement.” *Id.* at 81. The ALJ observed that “HP has shown

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(1) that APM employees discussed amongst themselves HP's patent infringement lawsuit against MicroJet, and how that would affect APM's business; and (2) that MicroJet shared its knowledge of patents other than the asserted HP patents with APM." *Id.* at 81. The ALJ, however, concluded that "HP has not explained how this evidence demonstrates a specific intent on the part of APM to encourage MicroJet's infringement of the patents-in-suit" and that "HP's evidence is insufficient to meet the high level of proof needed to show specific intent required for inducement." *Id.* at 81-82.

3. The Commission's Determination Regarding Whether APM Induced Infringement of the Asserted Patents

The Commission determined to review the ALJ's finding on inducement. Given the ALJ's finding that "APM certainly had knowledge of the asserted patents and the infringement at issue once it was served with HP's Complaint . . . [a]nd APM continued to sell its components to MicroJet even after receiving HP's Complaint" (ID at 91), the Commission asked the parties to brief whether APM satisfied the specific intent prong of induced infringement. The record evidence shows that prior to obtaining actual knowledge of the asserted patents, APM willfully blinded itself to the asserted patent and to the infringing conduct, and that even after obtaining actual knowledge of the asserted patents, APM continued to induce infringement of the patents [

]. *See, e.g.*, CX-242C at APM811412; CX-243C at APM811424; RX-69C.

APM's conduct satisfies the willful blindness test enunciated by the Supreme Court in *Global-*

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Tech. as well as the Federal Circuit's induced infringement case law. The Commission therefore reverses the ALJ's finding that APM did not induce infringement of the asserted patents.

Under *Global-Tech*, "a willfully blind defendant is one who takes deliberate actions to avoid confirming a high probability of wrongdoing and who can almost be said to have actually known the critical facts." *Global-Tech*, 131 S. Ct. at 2070-71. In other words, "(1) the defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact." *Id.* at 2070. The record evidence shows that [

] CX-242C at APM811412; CX-243C at APM811424. For instance, prior to this investigation, HP filed a complaint with the Commission that culminated in Inv. No. 337-TA-711. 75 *Fed. Reg.* 17435 (April 6, 2010). That complaint named MicroJet, but not APM, as a respondent. *Id.* All of the patents asserted in the 711 investigation were also asserted in this investigation. [

]

CX-242C at APM811412. In another exchange related to the present investigation,

] CX-243C at APM811424.

³ [

].

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These email exchanges reveal that [

]. The email exchanges also show that

[

].⁴ Instead, APM actively

avoided knowing about its infringing conduct [

].

By deliberately declining to take reasonable measures to confirm noninfringement when faced with the knowledge of the HP lawsuit and awareness that the HP patents in the suit had not expired, APM willfully blinded itself to the likelihood that [

] were themselves infringing. *See Global-Tech*, 131 S.

Ct. at 2071. APM's conduct therefore satisfies the test for induced infringement enunciated by the Court in *Global-Tech*.

Moreover, after being served with the complaint in this investigation, any doubt as to APM's knowledge that [

⁴ We note that although APM retained an infringement expert, [

]. Clark Tr. at 652:2-19; ID at 21.

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] evaporated. Instead of investigating HP's allegations of infringement after having been named as a respondent in this investigation, APM continued to engage in acts of inducement [

]. APM claims that immediately after it received the complaint in this investigation, [

]. However, the email exchanges set forth above demonstrate that APM knew that [

]. Notwithstanding, [

].

In concluding that APM did not induce infringement, the ALJ found that HP failed to provide sufficient evidence to demonstrate that APM had knowledge of the asserted patents prior to filing this investigation. ID at 80. However, as noted above, the ALJ found that "APM certainly had knowledge of the asserted patents and the allegations of infringement against its ICs once it was served with HP's Complaint" and that "APM continued to sell its components to

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MicroJet even after receiving HP's Complaint." ID at 91; RX-69C. That is, at a minimum, APM satisfied the knowledge requirement when it received the complaint.

The ALJ also found that "HP has not explained how [the] evidence demonstrates a specific intent on the part of APM to encourage MicroJet's infringement of the patents-in-suit" and that "HP's evidence is insufficient to meet the high level of proof needed to show specific intent required for inducement." ID at 81-82. We disagree. The Federal Circuit has explained that "[t]o establish liability under section 271(b), a patent holder must prove that once the defendants knew of the patent, they 'actively and knowingly aid[ed] and abett[ed] another's direct infringement.'" *DSU Med.*, 471 F.3d at 1305. The evidence shows that after being made aware of the asserted patents, [

]. Moreover, the record evidence establishes that the ICs do not have substantial non-infringing uses. ID at 89. In such instances, the Federal Circuit has indicated that the manufacture and sale of the contributorily infringing component may constitute the purposeful, culpable act sufficient to establish inducement. *See Ricoh Co., Ltd. v. Quanta Computer Inc.*, 550 F.3d 1325, 1343 (Fed. Cir. 2008); *see also, MGM Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913, 932 (2005) ("In sum, where an article is 'good for nothing else' but infringement [citation omitted], there is no legitimate public interest in its unlicensed availability, and there is no injustice in presuming or imputing an intent to infringe.").

APM's primary argument is that HP failed to show the occurrence of direct infringement after filing its complaint and, absent direct infringement, there can be no indirect infringement. *See* APM Br. at 1. APM waived this argument. Despite arguing throughout its post-trial brief

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that it only knew of the patents-in-suit due to the complaint in this investigation, APM never previously argued that there was insufficient proof of post-complaint direct infringement and thus did not give HP and the IA an opportunity to present evidence to the contrary. *See, e.g.*, APM Post Trial Br. at 39; APM Post Trial Reply Br. at 15, 21. Thus, under the ALJ's ground rules, APM waived the argument. Order No. 2, ALJ's Ground Rule 11.1 at 25. In any event, the record evidence shows post-complaint acts of direct infringement. *See* RX-69C (showing that

[

].

APM also argues that because [], it cannot possess the specific intent required for inducement and likens itself to a photocopy vendor that merely makes copies for a customer. Rather than being a mere photocopy vendor, APM is more like a publisher who aids and abets authors in publishing and selling their books. Specifically,

[

[]. Moreover, whether [] or not is not dispositive. *See VLT Corp. v. Unitrode Corp.*, 130 F. Supp. 2d 178, 200-01 (D. Mass. 2010) (rejecting accused inducing infringer's argument that "it must have some control over the design, manufacture, or marketing of infringing devices in order to be held liable under § 271(b)").

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The record evidence supports a finding that APM induced infringement of the asserted claims. Accordingly, we reverse the ALJ's finding to the contrary.

III. REMEDY

Where a violation of section 337 has been found, the Commission must consider the issues of remedy, the public interest, and bonding. The Commission has "broad discretion in selecting the form, scope, and extent of the remedy." *Viscofan, S.A. v. U.S. Int'l Trade Comm'n*, 787 F.2d 544, 548 (Fed. Cir. 1986). The Commission may issue an exclusion order excluding the goods of the person(s) found in violation (a limited exclusion order) or, if certain criteria are met, against all infringing goods regardless of the source (a general exclusion order).

The statutory authority of the Commission to issue a general exclusion order is codified in 19 U.S.C. § 1337(d)(2), which provides in relevant part:

(d) Exclusion of articles from entry

* * *

(2) The authority of the Commission to order an exclusion from entry of articles shall be limited to persons determined by the Commission to be violating this section unless the Commission determines that -

(A) a general exclusion from entry of articles is necessary to prevent circumvention of an exclusion order limited to products of named persons; or

(B) there is a pattern of violation of this section and it is difficult to identify the source of infringing products.

A general exclusion order has far reaching consequences and applies to entities not respondents in the investigation, and even to entities who could not have been respondents, such

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as entities who did not import until after the conclusion of the investigation. Thus, the Commission has stated that “[b]ecause of its considerable impact on international trade, potentially extending beyond the parties and articles involved in the investigation, more than just the interests of the parties is involved. Therefore, the Commission exercises caution in issuing general exclusion orders and requires that certain conditions be met before one is issued.”

Certain Agricultural Tractors Under 50 Power Takeoff Horsepower, Inv. No. 337-TA-380, Comm’n Op. (Mar. 12, 1997).

The Commission recently observed that “[w]hile the Commission has in the past considered analysis based on the *Spray Pumps* factors when evaluating whether the statutory criteria are satisfied, we now focus principally on the statutory language itself in light of recent Federal Circuit decisions.” See *Certain Ground Fault Circuit Interrupters and Products Containing Same*, Inv. No. 337-TA-615, Comm’n Op. at 25-26 (Mar. 27, 2009), (citing *Certain Airless Spray Pumps and Components Thereof*, Inv. No. 337-TA-90, Comm’n Op. at 18-19, USITC Pub. 119 (Nov. 1981)). This passage in *Circuit Interrupters* specifically references the Commission’s earlier opinion in *Hydraulic Excavators*, in which the Commission stated that “[c]onsideration of some factual issues or evidence examined in *Spray Pumps* may continue to be useful for determining whether the requirements of Section 337(d)(2) have been met. However, we do not view *Spray Pumps* as imposing additional requirements beyond those identified in Section 337(d)(2).” *Certain Hydraulic Excavators & Components Thereof*, Inv. No. 337-TA-582, Comm’n Op. at 16-18 (Feb. 3, 2009). Thus, in *Circuit Interrupters* and *Hydraulic Excavators*, the Commission did not apply the *Spray Pumps* factors in determining whether a

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general exclusion order should issue.

We agree with the ALJ and the IA that the facts of this investigation support issuance of a general exclusion order under 19 U.S.C. § 1337(d)(2)(A). *See* ID at 21-36; IA Br. at 6. The evidence shows that it is difficult to identify the source of infringing products, making a general exclusion order necessary to prevent circumvention of a limited exclusion order. For instance, the evidence shows that (1) “foreign manufacturers package their products in unmarked, generic or reseller branded packaging that lacks any markings to identify their origin” (CX-800C at 37-39 (Q. 116-18)); (2) [

]; and (4) many manufacturers and distributors create multiple websites and corporate identities allowing them to sell infringing products without revealing their true identities (CX-800C at 36-37 (Q.113-14); CX-787). ID at 112-113.

APM argues that the appropriate remedy is a limited exclusion order and relies heavily on the Commission’s opinion in *Circuit Interrupters*. According to APM, in *Circuit Interrupters*, the Commission rejected the complainant’s assertion that “foreign companies such as the manufacturing respondents frequently change names or corporate structure thereby making them difficult to identify, and that foreign entrepreneurs can easily build facilities capable of producing the patented products.” APM Br. at 13. APM’s reliance on *Circuit Interrupters* is misplaced. In *Circuit Interrupters*, the Complainant requested a general exclusion order because the manufacturing respondents frequently changed their names and corporate structure, making them

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difficult to identify. *Circuit Interrupters*, at * 38. The Commission rejected that reasoning and issued a limited exclusion order covering not only the named respondents but also their affiliates, successors, and assigns. *Id.* There was no allegation that the infringing products themselves were difficult to identify or that their packaging made them difficult to identify.

The evidence in this investigation, however, shows that a general exclusion order is necessary to prevent circumvention of the limited exclusion order. Mr. Barkley, HP's Manager of Intellectual Property and Brand Protections for the Imaging and Printing Group, provided detailed testimony that foreign manufacturers such as MicroJet do not label their products in a way that could reveal their origin and that it is difficult to identify the origin of infringing products. *See* ID at 112-14. No evidence in the record contravenes the testimony of Mr. Barkley. Accordingly the Commission adopts the recommendation of the ALJ and issues a general exclusion order in this investigation.⁵ Inkjet ink cartridges with printheads and components thereof that infringe one or more of claims 1-6 and 8-10 of the '598 patent; claims 1-6 and 8-17 of the '053 patent; claims 1, 3-5, and 8-12 of the '347 patent; claims 1-14 of the '817 patent; and claims 9-15 of the '279 patent are excluded from entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, for the remaining terms of the patents, except under license of the patent owner or as provided by law.

⁵ We agree with the ALJ and IA that HP did not establish a pattern of violation of section 337 under Section 337(d)(2)(B). Specifically, HP "failed to identify a single act of importation that is unrelated to one of the Respondents." ID at 114.

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VI. THE PUBLIC INTEREST

Section 337(d) of the Tariff Act of 1930, as amended, directs the Commission to consider certain public interest factors before issuing a remedy. These public interest factors include the effect of any remedial order on the “public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers.” 19 U.S.C. § 1337(d).

The IA and HP argue that the public interest factors are not implicated in this investigation. The IA states that “[t]here is no evidence that U.S. demand for the HP compatible ink cartridges cannot be met by Complainants and legitimate remanufacturers” and adds that inkjet ink cartridges are not the type of products that raise any particular public interest concerns. IA Br. at 8 (citing *Certain Ink Jet Print Cartridges and Components Thereof*, Inv. No. 337-TA-446, Comm’n Op. at 14, USITC Pub. 3549 (Oct. 2002) (noting that relief has been denied in only three investigations due to public interest factors, and that those investigations involved fuel-efficient automobiles, atomic research, and medical supplies). *Id.* The IA and HP point out that the public interest favors the protection of U.S. intellectual property rights by excluding infringing imports. *Id.* (citing *Certain Two-Handle Centerset Faucets and Escutcheons, and Components Thereof*, Inv. No. 337-TA-422, Comm’n Op. at 9 (July 2000)); HP Br. at 15.

APM does not make a credible argument regarding the public interest. *See* APM Br at 16-19. The only somewhat relevant argument APM makes is that a limited exclusion order “would serve the public interest properly by punishing the offending Respondents, namely MicroJet and PTC, without affecting the competitive conditions in the U.S.” *Id.* at 19. APM

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adds that a general exclusion order, “on the other hand, would not serve the public interest because it would allow HP to misuse the ITC to reduce the number of choices available to the public without having to prove infringement, validity and importation in a meaningful way.” *Id.* APM provides no evidence to substantiate its assertions, and we find nothing in the record to support them. Moreover, this investigation followed the Commission’s well established process for investigating alleged violations of the section 337. We see no need to treat this investigation any differently from other Commission investigations, and the Commission’s forum is open to all entities that meet the Commission’s statutory requirement. In addition, the Commission’s statutory authority provides a mechanism for modifying or rescinding exclusion orders where appropriate. *See* 19 U.S.C. § 1337(k).

Thus, we agree with the IA and HP that the public interest factors are not implicated in this investigation. In particular, no evidence exists that United States demand for the HP compatible ink cartridges cannot be met by HP and legitimate remanufacturers. Accordingly, we find that the public interest factors set out in section 337(d) do not preclude issuance of the general exclusion order.

VII. BOND

During the 60-day period of Presidential review, imported articles otherwise subject to remedial orders are entitled to conditional entry under bond. 19 U.S.C. § 1337(j)(3). The amount of the bond is specified by the Commission and must be an amount sufficient to protect the complainant from any injury. *Id.*; 19 C.F.R. § 210.50(a)(3). The Commission frequently sets the bond by attempting to eliminate the difference in sales prices between the patented domestic

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product and the infringing product based upon a reasonable royalty. *Certain Microsphere Adhesives, Process For Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op. at 24, USITC Pub. No. 2949 (Jan. 1996). In cases where the Commission does not have sufficient evidence upon which to base a determination of the appropriate amount of the bond, the Commission has set a 100% bond. *See Certain Sortation Systems, Parts Thereof, and Products Containing Same*, Inv. No. 337-TA-460, Comm'n Op. at 21 (Mar. 2003). However, Complainant bears the burden of establishing the need for a bond amount in the first place. *Certain Rubber Antidegradants, Components Thereof, and Prods. Containing Same*, Inv. No. 337-TA-533, Comm'n Op. at 39-40 (July 21, 2006).

The ALJ recommended that if the Commission imposes a remedy following a finding of violation, Respondents should be required to post a bond of 100 percent of the entered value of any infringing products imported during the period of Presidential review. ID at 117. Specifically, because "MicroJet and PTC failed to participate in any way in the hearing process, including discovery," the ALJ determined "that it would be futile for HP to attempt to obtain reliable pricing information from [them] to calculate the price differential between HP's inkjet cartridges and the infringing inkjet cartridges." ID at 117. The ALJ therefore recommended a bond of 100 percent of entered value. *Id.* HP and the IA support the ALJ's recommendation. APM did not comment.

We share the ALJ's view. Given the fact that MicroJet and PTC failed to participate in any meaningful manner, HP could not have obtained the requisite information from them to establish the appropriate bond. In cases where the Commission does not have sufficient evidence


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upon which to base a determination of the appropriate amount of the bond, the Commission has set a 100 percent bond. The Commission therefore sets a bond of 100 percent of entered value for products imported during the period of presidential review.

VIII. CONCLUSION

For the reasons set forth above, the Commission reverses the ALJ's finding that HP failed to establish by a preponderance of the evidence that APM induced infringement of the asserted patents. The Commission determines that the appropriate remedy is a general exclusion order, and finds that the public interest factors set out in section 337(d) do not preclude issuance of the general exclusion order. The Commission sets a bond of 100 percent of entered value for infringing products imported during the period of Presidential review.

By order of the Commission.

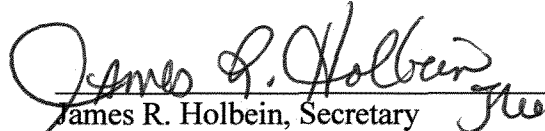

James R. Holbein
Secretary to the Commission

Issued: December 1, 2011

**CERTAIN INKJET INK CARTRIDGES WITH PRINTHEADS 337-TA-723
AND COMPONENTS THEREOF**

CERTIFICATE OF SERVICE

I, James Holbein, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the Commission Investigative Attorney, Rett Sotherly, Esq., and the following parties as indicated, on **December 1, 2011**.


James R. Holbein, Secretary
U.S. International Trade Commission
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Washington, DC 20436

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of

**CERTAIN INKJET INK CARTRIDGES
WITH PRINTHEADS AND COMPONENTS
THEREOF**

Investigation No. 337-TA-723

**NOTICE OF COMMISSION DETERMINATION TO REVIEW IN PART A FINAL
INITIAL DETERMINATION FINDING A VIOLATION OF SECTION 337; SCHEDULE
FOR FILING WRITTEN SUBMISSIONS ON THE ISSUE UNDER REVIEW AND ON
REMEDY, THE PUBLIC INTEREST AND BONDING**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review in part the final initial determination ("ID") issued by the presiding administrative law judge ("ALJ") on June 10, 2011, finding a violation of section 337 of the Tariff Act of 1930, 19 U.S.C. § 1337, in this investigation.

FOR FURTHER INFORMATION CONTACT: Panyin A. Hughes, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-3042. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <http://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on June 25, 2010, based on a complaint filed by Hewlett-Packard Company of Palo Alto, California and Hewlett-Packard Development Company, L.P., of Houston, Texas (collectively "HP"). 75 *Fed. Reg.* 36442 (June 25, 2010). The complaint alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof by reason of infringement of various claims of United States Patent Nos. 6,234,598 ("the '598 patent"); 6,309,053 ("the '053 patent"); 6,398,347 ("the '347 patent"); 6,481,817 ("the '817 patent"); 6,402,279 ("the '279 patent"); and 6,412,917 ("the '917 patent").

The '917 patent was subsequently terminated from the investigation. The complaint named the following entities as respondents: MicroJet Technology Co., Ltd. of Hsinchu City, Taiwan ("MicroJet"); Asia Pacific Microsystems, Inc. of Hsinchu City, Taiwan ("APM"); Mipo Technology Limited of Kowloon, Hong Kong ("Mipo Tech."); Mipo Science & Technology Co., Ltd. of Guangzhou, China ("Mipo"); Mextec d/b/a Mipo America Ltd. of Miami, Florida ("Mextec"); SinoTime Technologies, Inc. d/b/a All Colors of Miami, Florida ("SinoTime"); and PTC Holdings Limited of Kowloon, Hong Kong ("PTC").

Respondents Mipo, Mipo Tech., SinoTime, and Mextec were subsequently terminated from the investigation. Respondent MicroJet defaulted. Respondent PTC did not participate in the hearing and failed to file post-hearing briefs. Pursuant to 19 C.F.R. §§ 210.17(d) and (e), the ALJ drew an adverse inference against PTC that "PTC imported accused products into the United States, that those products were manufactured by MicroJet, and that those products contain ICs [integrated circuits] made by APM." ID at 29.

On June 10, 2011, the ALJ issued his final ID, finding a violation of section 337 by the respondents. Specifically, the ALJ found that the Commission has subject matter jurisdiction: *in rem jurisdiction* over the accused products and *in personam* jurisdiction over the respondents. The ALJ also found that there has been an importation into the United States, sale for importation, or sale within the United States after importation of the accused inkjet ink cartridges with printheads and components thereof. Regarding infringement, the ALJ found that MicroJet and PTC directly infringe claims 1-6 and 8-10 of the '598 patent, claims 1-6 and 8-17 of the '053 patent, claims 1, 3-5, and 8-12 of the '347 patent, claims 1-14 of the '817 patent, and claims 9-15 of the '279 patent. The ALJ also found that MicroJet induces infringement of those claims. The ALJ further found that APM does not directly infringe claims 1-5 of the '598 and does not induce infringement of the asserted patents. The ALJ, however, found APM liable for contributory infringement. With respect to invalidity, the ALJ found that the asserted patents were not invalid. Finally, the ALJ concluded that an industry exists within the United States that practices the '598, '053, '347, '817, and '279 patents as required by 19 U.S.C. § 1337(a)(2).

On June 24, 2011, HP filed a contingent petition for review of the ID. On June 27, 2011, APM and the Commission investigative attorney ("IA") filed petitions for review of the ID. On July 5, 2011, the parties filed responses to the various petitions and contingent petition for review.

Having examined the record of this investigation, including the ALJ's final ID, the petitions for review, and the responses thereto, the Commission has determined to review the final ID in part. Specifically, the Commission has determined to review the finding that HP failed to establish by a preponderance of the evidence that Respondent APM induced infringement of the asserted patents. The Commission has determined not to review any other issues in the ID.

The parties are requested to brief their positions on the issue under review with reference to the applicable law and the evidentiary record. In connection with its review, the Commission is particularly interested in a response to the following question:

1. Does the record evidence demonstrate that APM's conduct meets the "specific intent" requirement for inducement in light of the ALJ's finding that "APM certainly had knowledge of the asserted patents and the infringement at issue once it was served with HP's Complaint. And APM continued to sell its components to MicroJet even after receiving HP's Complaint"? ID at 91; RX-69C. See *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1305 (Fed. Cir. 2006).

In connection with the final disposition of this investigation, the Commission may (1) issue an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) issue one or more cease and desist orders that could result in the respondent(s) being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or likely to do so. For background, see *In the Matter of Certain Devices for Connecting Computers via Telephone Lines*, Inv. No. 337-TA-360, USITC Pub. No. 2843 (December 1994) (Commission Opinion).

If the Commission contemplates some form of remedy, it must consider the effects of that remedy upon the public interest. The factors the Commission will consider include the effect that an exclusion order and/or cease and desist orders would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission's action. See Presidential Memorandum of July 21, 2005, 70 *Fed. Reg.* 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

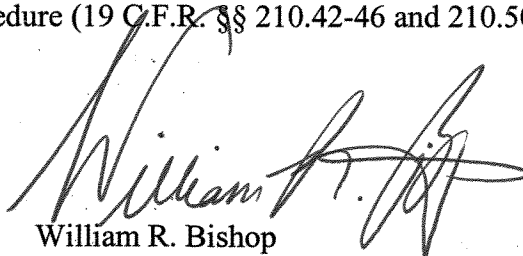
WRITTEN SUBMISSIONS: The parties to the investigation are requested to file written submissions on the issue identified in this notice. Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest, and bonding. Such submissions should address the recommended determination by the ALJ on remedy and bonding. Complainants and the IA are also requested to submit proposed remedial orders for the Commission's consideration. Complainants are also requested to state the date that the patents expire and the HTSUS numbers under which the accused products are imported. The written submissions and proposed remedial orders must be filed no later than close of business on Thursday, August 25, 2011. Reply submissions must be filed no later than the close of business on Thursday, September 1, 2011.

No further submissions on these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document and 12 true copies thereof on or before the deadlines stated above with the Office of the Secretary. Any person desiring to submit a document to the Commission in confidence must request confidential treatment unless the information has already been granted such treatment during the proceedings. All such requests should be directed to the Secretary of the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 C.F.R. § 210.6. Documents for which confidential treatment by the Commission is sought will be treated accordingly. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in sections 210.42-46 and 210.50 of the Commission's Rules of Practice and Procedure (19 C.F.R. §§ 210.42-46 and 210.50).

By order of the Commission.



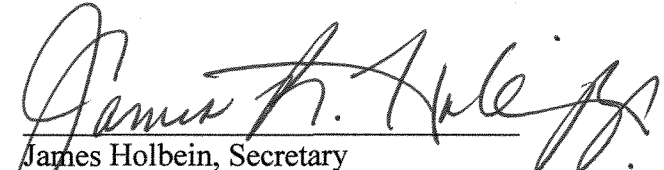
William R. Bishop
Acting Secretary to the Commission

Issued: August 11, 2011

**CERTAIN INKJET INK CARTRIDGES WITH PRINTHEADS 337-TA-723
AND COMPONENTS THEREOF**

CERTIFICATE OF SERVICE

I, James Holbein, hereby certify that the attached **NOTICE OF COMMISSION DETERMINATION** has been served by hand upon the Commission Investigative Attorney, Rett Snotherly, Esq., and the following parties as indicated, on
August 11, 2011


James Holbein, Secretary
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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

CERTAIN INKJET INK CARTRIDGES WITH
PRINTHEADS AND COMPONENTS
THEREOF

Inv. Nos. 337-TA-723

INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND

Administrative Law Judge Robert K. Rogers, Jr.

(June 10, 2011)

Appearances:

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For the Commission Investigative Staff:

Lynn I. Levine, Esq., Director; Anne Goalwin, Esq., Supervisory Attorney; Rett Snotherly, Esq., Investigative Attorney; of the Office of Unfair Import Investigations, U.S. International Trade Commission, of Washington, DC

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Pursuant to the Notice of Investigation and Rule 210.42 of the Rules of Practice and Procedure of the United States International Trade Commission, this is the Administrative Law Judge's Final Initial Determination in the matter of Certain Inkjet Ink Cartridges With Printheads & Components Thereof, Investigation No. 337-TA-723.

The Administrative Law Judge hereby determines that a violation of Section 337 of the Tariff Act of 1930, as amended, has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof, in connection with U.S. Patent No. 6,234,598. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent No. 6,234,598.

The Administrative Law Judge hereby determines that a violation of Section 337 of the Tariff Act of 1930, as amended, has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof, in connection with U.S. Patent No. 6,309,053. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent No. 6,309,053.

The Administrative Law Judge hereby determines that a violation of Section 337 of the Tariff Act of 1930, as amended, has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof, in connection with U.S. Patent No. 6,398,347. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent No. 6,398,347.

The Administrative Law Judge hereby determines that a violation of Section 337 of the

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Tariff Act of 1930, as amended, has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof, in connection with U.S. Patent No. 6,481,817. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent No. 6,481,817.

The Administrative Law Judge hereby determines that a violation of Section 337 of the Tariff Act of 1930, as amended, has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof, in connection with U.S. Patent No. 6,402,270. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent No. 6,402,270.

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The following abbreviations may be used in this Initial Determination:

CDX	Complainant's demonstrative exhibit
CIB	Complainant's initial post-hearing brief
CPX	Complainant's physical exhibit
CRB	Complainant's reply post-hearing brief
CX	Complainant's exhibit
Dep.	Deposition
JSRCC	Joint Statement Regarding Claim Construction
JSCI	Joint Stipulation of Contested Issues
JX	Joint Exhibit
RDX	Respondent's demonstrative exhibit
RIB	Respondent's initial post-hearing brief
RPX	Respondent's physical exhibit
RRB	Respondent's reply post-hearing brief
RX	Respondent's exhibit
SIB	Staff's initial post-hearing brief
SRB	Staff's reply post-hearing brief
Tr.	Transcript
CPHB	Complainants' pre-hearing brief
RPHB	Respondents' pre-hearing brief
SPHB	Staff's pre-hearing brief

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I. BACKGROUND

A. Procedural History

On June 21, 2010, the Commission issued a Notice of Investigation in this matter to determine:

[W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof that infringe one or more of claims 1-10 of the '598 patent; claims 1-6 and 8-17 of the '053 patent; claims 1-6 and 8-12 of the '347 patent; claims 1-21 of the '917 patent; claims 1-15 of the '817 patent; and claims 9-16 of the '279 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

(See Notice of Investigation.) The investigation was instituted upon publication of the Notice of Investigation in the *Federal Register* on June 25, 2010. See 75 Fed. Reg. 36442 (2010). 19 CFR § 210.10(b).

The complainants are Hewlett-Packard Company, 3000 Hanover Street, Palo Alto, CA 94304; Hewlett-Packard Development Company, L.P., 11455 Compaq Center Drive West, Houston, TX 77070 (collectively "HP"). The respondents were MicroJet Technology Co., Ltd. of Hsinchu City, Taiwan 30076 ("MicroJet"); Asia Pacific Microsystems, Inc. of Hsinchu City, Taiwan 30076 ("APM"); Mipo Technology Limited of Kowloon, Hong Kong; Mipo Science & Technology Co., Ltd. of Guangzhou, China; Mextec d/b/a Mipo America Ltd. of Miami, FL; SinoTime Technologies, Inc. of Miami, FL; PTC Holdings Limited of Kowloon, Hong Kong ("PTC"). The Commission Investigative Staff of the Office of Unfair Import Investigations ("Staff") is also a party in this investigation.

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On September 20, 2010, I issued an initial determination finding respondent MicroJet Technology Co., Ltd. in default pursuant to 19 CFR § 210.16(a)(1) for failure to respond to the Complaint and Notice of Investigation. On October 19, 2010, the Commission issued a notice declining to review that initial determination.

On October 28, 2010, I issued an initial determination terminating the investigation as to respondents Mipo Science & Technology Co, Ltd. and Mipo Technology Limited on the basis of a consent order. On November 18, 2010, the Commission issued a notice declining to review that initial determination.

On November 10, 2010, I issued an initial determination terminating the investigation as to respondent SinoTime Technologies, Inc. d/b/a All Colors on the basis of a settlement agreement. On November 29, 2010, the Commission issued a notice declining to review that initial determination.

On November 10, 2010, I issued an initial determination terminating the investigation as to respondent Mextec d/b/a Mipo America Ltd. on the basis of a settlement agreement. On November 29, 2010, the Commission issued a notice declining to review that initial determination.

On January 11, 2011, I issued an initial determination granting HP's motion for summary determination that it satisfies the economic prong of the domestic industry requirement. On January 31, 2011, the Commission issued a notice declining to review that initial determination.

On January 11, 2011, I issued an initial determination granting HP's motion for summary determination that U.S. Patent Nos. 6,309,053; 6,398,347; 6,412,917; 6,481,817; and 6,402,279 are not invalid. On February 7, 2011, the Commission issued a notice declining to review that initial determination.

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On January 27, 2011, I issued an initial determination terminating the investigation in part based on the withdrawal of U.S. Patent No. 6,412,917 (“the ‘917 patent”). On February 10, 2011, the Commission issued a notice declining to review that initial determination.

All other motions for summary determination were denied.

An evidentiary hearing was conducted before me from March 14, 2011 through March 16, 2011. HP, APM, and Staff participated in the hearing. In support of its case-in-chief, HP called the following witnesses:

- Joseph M. Torgerson (Engineer at HP and named inventor on each of the asserted patents);
- Trudy Benjamin (Engineer at HP);
- Byron K. Davis (Manufacturing Manager of Specialty Printing System Division for the Imaging and Printing Group of HP);
- Matthew Barkley (Manager of Intellectual Property and Brand Protection Programs for the Imaging and Printing Group of HP);
- Ruben Pena (former employee of HP and MicroJet);
- Dr. Stephen Pond (expert witness);
- Su Shin Ming (Senior Deputy Manager at APM); and
- Chung Chieh Hsieh (Senior Deputy Manager at APM).

In support of its rebuttal case, APM called the following witness:¹

- Dr. Lloyd Douglas Clark (expert witness).

In addition, various deposition transcripts were received into evidence in lieu of direct witness statements or live testimony.

¹ APM did not call any witnesses as part of its case-in-chief.

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After the hearing, post-hearing briefs and reply briefs were filed on April 8, 2011 and April 15, 2011, respectively.

B. The Private Parties

1. HP

Hewlett-Packard Company is a Delaware corporation having a principal place of business in Palo Alto, California. (Complaint at ¶ 2.1.) Hewlett-Packard Development Company, L.P. is a wholly-owned subsidiary of Hewlett-Packard Company, and is a Texas limited partnership having a principal place of business in Houston, Texas. (*Id.*)

2. APM

APM is a MEMS foundry located in Hsinchu Science Park in Taiwan. (CX-45.)

3. PTC

PTC is a company based in Hong Kong that offers products such as toner cartridges, inkjet cartridges, and copier cartridges to the aftermarket. (CX-8.)

4. MicroJet

MicroJet is a subsidiary of the publicly held entity, DBTel Inc. and is organized and existing under the laws of Taiwan with its principal place of business located in Hsinchu Science Park in Taiwan. (Complaint at ¶ 3.1.)

C. Overview Of The Patents At Issue

U.S. Patent No. 6,234,598 (“the ‘598 patent”) is titled “Shared Multiple Terminal Ground Returns for an Inkjet Printhead,” and names Joseph M. Torgerson, Rama Prasad, Todd A. Cleland, and Dale R. Oughton as the inventors. (JX-1.) The ‘598 patent was filed on August 30, 1999 and issued on May 22, 2001. (*Id.*) The Abstract states:

For an inkjet printing apparatus having a large number of ink ejectors, it is desirable to have as few as possible interconnections to the ink ejectors. Sharing

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electrical ground returns between related ink ejector primitive groups with spaced apart terminals provides a reduction in interconnections while offering redundancy in the interconnection.

(Id.)

U.S. Patent No. 6,309,053 (“the ‘053 patent”) is titled “Ink Jet Printhead Having a Ground Bus That Overlaps Transistor Active Regions,” and names Joseph M. Torgerson and David M. Hurst as the inventors. (JX-2.) The ‘053 patent was filed on July 24, 2000 and issued on October 30, 2001. *(Id.)* The Abstract states:

An ink jet printhead having a ground bus that partially overlies active regions of FET drive circuits.

(Id.)

U.S. Patent No. 6,398,347 (“the ‘347 patent”) is titled “Energy Balanced Ink Jet Printhead,” and names Joseph M. Torgerson and David M. Hurst as the inventors. (JX-3.) The ‘053 patent was filed on July 24, 2000 and issued on June 4, 2002. *(Id.)* The Abstract states:

An ink jet printhead having FET drive circuits that are configured to compensate for power trace parasitic resistances.

(Id.)

U.S. Patent No. 6,481,817 (“the ‘817 patent”) is titled “Method and Apparatus for Ejecting Ink,” and names Joseph M. Torgerson, Bruce Cowger, David M. Hurst, and Mark H. MacKenzie as the inventors. (JX-5.) The ‘817 patent was filed on October 30, 2000 and issued on November 19, 2002. *(Id.)* The Abstract states:

The present disclosure relates to an inkjet printhead having a plurality of drop generators responsive to drive current and address signals for dispensing ink. The inkjet printhead includes first and second drop generators disposed on the printhead with each of the first and second drop generators configured to receive drive current from a drive current source. Each of the first and second drop generators is configured to receive address signals from a common address source. The inkjet printhead further includes a switching device connected between the common address source and each of the first and second drop

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generators. The switching device is responsive to enable signals for selectively providing the address signal to only one of the first and second drop generators.

(*Id.*)

U.S. Patent No. 6,402,279 (“the ‘279 patent”) is titled “Inkjet Printhead and Method for the Same,” and names Joseph M. Torgerson, Bruce Cowger, David M. Hurst, and Mark H. MacKenzie as the inventors. (JX-6.) The ‘279 patent was filed on October 30, 2000 and issued on June 11, 2002. (*Id.*) The Abstract states:

The present disclosure relates to an inkjet printhead having a plurality of drop generators that selectively eject ink in response to activation. The inkjet printhead includes first and second drop generators disposed on the printhead. Each of the first and second drop generators are configured for connection to a source of drive current. The inkjet printhead also includes a control device configured for connection to a periodic address signal and first and second periodic enable signals. The control device is responsive to the first periodic enable signal and periodic address signal for enabling the first drop generator for activation in response to drive current. The control device is responsive to the second periodic enable signal and periodic address signal for enabling the second drop generator for activation in response to drive current.

(*Id.*)

D. Products At Issue

1. Accused Products

HP asserts that the accused products include inkjet ink cartridges manufactured and sold by MicroJet, the foreign and domestic Mipo entities, and PTC that are designed to work on HP printers that require a cartridge that belongs to the HP 56/57 Family of products. HP calls such products “clones” or “HP-compatible” inkjet ink cartridges.

In addition to the inkjet cartridges, HP accuses APM’s integrated circuits of infringement. APM manufactures and sells wafers, which contain hundreds of integrated circuits that HP claims are used in the manufacture of the inkjet cartridges. HP asserts that the APM integrated

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circuits are found in the inkjet cartridges manufactured by MicroJet and sold by the Mipo entities and PTC.

HP also identifies Mipo products as accused products in this investigation. All of the foreign and domestic Mipo respondents have been terminated from this investigation through either settlement agreements or consent orders. (See Order Nos. 16, 17, 18.) Because each of those respondents have been terminated from the investigation through either a settlement agreement or a consent order, the Mipo products are no longer accused products at issue in this investigation.

2. Domestic Industry Products

To demonstrate a domestic industry, HP relies on the inkjet cartridges that make up the HP 56/57 Family of products. HP's expert analyzed the HP 57 print cartridge, an exemplary product in the HP 56/57 Family, to show that it practices at least one claim of each of the asserted patents.

II. JURISDICTION

A. Subject Matter Jurisdiction

The Commission has subject matter jurisdiction over certain acts of unfair importation, namely:

[t]he importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee of articles that . . . infringe a valid and enforceable United States patent

19 U.S.C § 1337(a)(1)(B)(i); see *Amgen, Inc. v. United States Int'l Trade Comm'n*, 902 F.2d 1532, 1536 (Fed. Cir. 1990).

The Complaint alleges that APM, PTC, the MIPO parties, and MicroJet have violated subsection 337(a)(1)(B) by the sale for importation and importation of products that infringe the

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asserted patents. To meet its burden of proof with respect to “importation into the United States,” a complainant need only prove importation of a single accused product. *Certain Purple Protective Gloves*, Inv. No. 337-TA-500, Order No. 17 at 5 (Sept. 23, 2004) (unreviewed); *Certain Trolley Wheel Assemblies*, Inv. No. 337-TA-161, Views of the Commission at 6 (Aug. 29, 1984). With regard to a “sale for importation,” a complainant must prove that a respondent sold infringing articles and knew or should have known that those articles would be subsequently exported to the United States. See *Certain Sputtered Carbon Coated Computer Disks & Products Containing Same, Including Disk Drives*, Inv. No. 337-TA-350, Comm’n Opinions (Views of Vice Chairman Watson, and Commissioners Brunsdale and Crawford) (Oct. 27, 1993). The following sections evaluate the Commission’s subject matter jurisdiction over HP’s claims with respect to the various respondents in this investigation.

Subject Matter Jurisdiction With Respect to APM’s Products

HP’s Position: HP contends that the Commission has subject matter jurisdiction over its claims concerning APM products based on the fact that APM allegedly sells integrated circuits (“ICs”) for importation into the United States. HP claims APM sells ICs to MicroJet, who uses the ICs to make HP-compatible printer cartridges that are ultimately imported in the United States. HP lists five bases for concluding that printer cartridges imported into the U.S. contain APM parts.

First, HP argues that APM made several admissions during this investigation that show APM’s connection to MicroJet. HP points to statements from APM’s expert witness, Dr. Clark, which indicate {

.} (Citing RX-18C at ¶¶ 23-24.)

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Second, HP cites comparison analyses conducted by its expert witness Dr. Pond. Dr. Pond compared pictures of APM ICs from APM documents to ICs found in allegedly imported printer cartridges and found the similarities “striking.” (CX-801C at 321-340.) Dr. Pond also compared sample wafers produced by APM during discovery to ICs found in allegedly imported printer cartridges. (*Id.* at 341-355.) Again, Dr. Pond found the similarities “striking.” (*Id.*) Dr. Pond concluded that the allegedly imported printer cartridges include ICs made by APM. (Citing CX-801C at 317.) HP also rebuts APM’s assertion {

}

HP points to testimony from Dr. Pond that natural variations could occur among different batches of the same kind of wafer. (Citing Tr. at 324:7-21.) HP also cites evidence {

} (Citing CX-826; CX-827; Tr. at 622:17-22.)

Third, HP cites testimony from Mr. Shin Ming (“Sam”) Su in which he states that {

} (Citing Tr. at 574:2-5.) HP contends that the patterns identified by Mr. Su are from printer cartridges imported without authorization. (Citing CX-801C at 39-40.)

Fourth, HP contends that APM is likely MicroJet’s only IC supplier. HP cited testimony concerning the business difficulties of using multiple suppliers. (Citing, *e.g.*, CX 803C at Q 43.) HP also cited testimony from Mr. Ruben Pena, a former employee of both HP and MicroJet, which HP construes as indicating that MicroJet used a single IC fabrication house in the 2002-2004 timeframe. (Citing Tr. at 422:24-423:10.)

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Fifth, HP presents a statistical argument not based on any evidence. HP argues that if a large enough number of MicroJet products are imported into the U.S. “it is highly likely that at least 1 cartridge containing an APM chip entered the United States.” (CIB at 53.)

Turning to APM’s knowledge, HP argues that APM knew or should have known that the ICs it sold to MicroJet are meant to be HP-compatible. HP contends {

} HP uses the email to link {

} (Citing CX-812C.)

Next, HP argues that APM should have known that the MicroJet parts that use APM components are meant to be used with HP printers. HP cites MicroJet catalogs describing the MicroJet HC-E01 as compatible with the HP 27 (black) ink cartridge and the MicroJet HC-E02 as compatible with HP 28 (color) ink cartridge. (Citing CX-98 at HP-TIJ 0104535.) Further, HP asserts that APM has actual knowledge that at least some MicroJet printer cartridges are meant to be used with HP printers. For this assertion HP relies upon an email chain between employees of APM and MicroJet { } (Citing CX-103C.)

HP also argues that at least by March 2010 APM knew that MicroJet ink cartridges were being imported or sold for importation into the United States. HP explains that in March 2010 it filed complaints with the Commission² and in the U.S. District Court for the Northern District of California alleging that infringing MicroJet printer cartridges are being imported into the United States. HP relies on two email chains involving APM employees from March 2010 to demonstrate this knowledge. (Citing CX-242C; CX-243C.) In one email chain, {

² The complaint resulted in Investigation No. 337-TA-711, which has since been terminated.

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} (CX-242C.) In another email chain, Mr. Pu stated that {

} (CX-243C.) HP argues that {

}

HP also attempts to discredit statements from ex-MicroJet employee Mr. Pena indicating that MicroJet has a policy against selling products into the United States. HP argues in its reply brief that Mr. Pena's testimony is based on statements he heard during his employment at MicroJet at least six years ago and is not a reliable indication of current MicroJet practices. (Citing Tr. at 440:22-444:6.) HP further contends that MicroJet had previously stated that {

} HP argues, MicroJet's assurances that it does not sell products for importation into the United States cannot be trusted.

HP states that "[t]he actual accused products that were imported into the United States consist of 1) several MIPO branded clones that were the subject of investigative purchases made by HP in the United States and 2) PTC branded clones that were on display at a PTC booth in the Consumer Electronics show in Las Vegas, Nevada." (CIB at 63.) HP claims that the MIPO products were ordered by HP employees, mostly over the Internet, and the PTC products were observed by HP employees at the Consumer Electronics show. (Citing CX-800C at Qs 46-48, 66-73; Tr. at 226:9-227:27; CX-35.) HP contends that the MIPO and PTC products observed by HP employees in the U.S. have the same characteristics as MicroJet products that were shipped by MicroJet to { .} (Citing CX-800C at Q 79.) Those characteristics

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include (1) ovoid install blocks; (2) the fit and finish of the cartridge body; (3) plastic/clear plastic nozzle plate; (4) characteristics of the flex; (5) the color of the pull tape; and (6) vertically aligned and centered datum with letter code. (Citing CX-800C at Q 89-98; Tr. at 232:10-234:12.)

APM's Position: APM argues that the only allegation that connects APM's products to the United States is HP's theory that MicroJet imports or sells for importation products containing ICs made by APM. APM states that there is no dispute that APM {

} (Citing Tr. at 261:10-262:22, 295:21-296:10.) However, APM contends that HP failed to show that (1) the accused MicroJet products have been imported into the U.S., and (2) the accused inkjet cartridges presented at trial include integrated circuits made by APM. A summary of APM's arguments with respect to each point follows.

First, APM disputes HP's evidence that MicroJet products have been imported into the United States. APM cites the testimony of a former employee of both MicroJet and HP, Mr. Pena. Mr. Pena states that it was MicroJet's policy not to do business in the U.S., that it would be expensive for MicroJet to ship product into the U.S. via a third party, that Mr. Pena knew of no MicroJet customers in the U.S., and that MicroJet did not suspect its customers were exporting MicroJet products to the U.S. (Citing Tr. at 431:13-435:23; 436:21-437:25; 443:24-444:11.) APM also cites a {

} APM further relies upon testimony by

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HP's employee Byron Davis stating that if MicroJet had represented to APM that it does not sell products for importation into the United States, then it would have been reasonable for APM to rely on that assurance. (Citing Tr. at 185:10-24.)

APM further argues that the only accused products purchased by HP in the U.S. are the MIPO products; APM contends the accused PTC and MicroJet products were purchased outside the U.S. (Citing Tr. at 209:14-22, 210:6-211:17, 227:12-228:14; CX-800C at Q. 73-77.) APM asserts that the accused MicroJet product examined by HP's expert was procured in {

}

APM also criticizes HP's evidence that its employees saw infringing PTC products at the Consumer Electronics show in Las Vegas, Nevada. APM responds that CX-751 is merely a photograph of a booth rented by PTC and CX-35 is merely a blurred picture showing two cartridge-like devices. APM argues that HP never purchased the devices in the photograph and HP's expert never examined those devices. Therefore, APM contends, there is no evidence that the products in the trade show photograph are the same as the PTC product that HP's expert examined. (Citing CX-801C at Q. 129-130.)

APM further contends that HP initiated all of the transactions that HP relies upon to prove importation. APM argues that those transactions cannot form the basis for personal jurisdiction over APM as a matter of law. APM cites several federal district court cases finding

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no personal jurisdiction over a defendant who responded to inquiries originating in the forum state because the defendant did not purposefully avail itself of the forum state.

Turning to the question of whether or not MicroJet products contain ICs made by APM, APM argues that the evidence suggests that MicroJet uses multiple foundries. APM points to HP's statement in its pre-hearing brief that "[t]here are also a large number of entities at the same position in the supply chain as MicroJet: at least 20 who have the ability to produce hundreds of thousands of infringing cartridges on a monthly basis." (Citing CPHB at 267.) APM argues that this statement shows that there is a high probability that the accused products discussed during the hearing were made by someone other than MicroJet. APM also cites testimony from HP's employee Ms. Benjamin in which she states that it would be reasonable for a cartridge make to use multiple wafer suppliers. (Citing Tr. at 148:25-149:20.) APM further contends {

} . APM asserts {

} (Citing Tr. at 612:22-613:4, 259:12-260:6.) Additionally, APM argues

{

.} (Citing Tr. at 521:7-15, 522:3-22, 537:1-6.)

APM next argues that the comparison analysis of suspected APM products conducted by HP's expert Dr. Pond is not scientifically reliable. APM notes {

} APM argues {

} (Citing Tr. at 585:-586:5.) APM also

notes that {

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} (Citing Tr. at 317:25-318:17.) APM contends that {

.} (Citing Tr. at 691:22-692:16.)

APM further contends that {

.} APM acknowledges that

Dr. Pond examined the cross-section of a MIPO cartridge using an SEM. (Citing RX-46C.)

However, APM contends that {

.} (Citing RX101-C; Tr. at

322:21-323:15, 327:9-328:2, 605:17-607:2.) APM argues that Dr. Pond was unable to explain these differences. (Citing Tr. 322:21-325:24.) APM notes that HP only examined one MIPO cartridge using an SEM and did not examine other MicroJet and PTC cartridges using that device. (Citing CX-201C at Q 130.)

In its reply brief, APM cites testimony from HP witnesses which APM construes as an indication that it would be reasonable for MicroJet to use multiple foundries to supply printhead ICs. (Citing Tr. at 113:23-114:8, 149:15-20, 172:10-13, 185:23-186:20, 258:10-19.) APM contends {

.} APM speculates that {

}

APM's reply brief also downplays the significance {

} APM characterizes {

} (Citing Tr. at

492:10-17, 494:9-14, 495:8-17, 497:6-12, 500:17-501:6, 505:10-18.)

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Staff's Position: Staff contends that MIPO MP-57A printer cartridges (referred to by HP and its expert Dr. Pond as MP-C57A) were purchased in the United States in January 2010.

(Citing CX-800C at Q. 71, 121, 122.) Staff asserts that Dr. Pond's analysis of the MP-57A shows that it contains a printhead integrated circuit manufactured by APM. (Citing CX-801C at Q. 522-596.) Staff rejects as "highly improbable" APM's argument {

} Staff cites

testimony from HP's employee Ms. Benjamin and HP's expert Dr. Pond indicating that differences in the production lines at different foundries would make the use of the same mask by those foundries impractical. (Citing Tr. at 160, 360-61.) Staff also points to Dr. Pond's testimony that the low numbers of ICs required by MicroJet would not justify two or more IC suppliers. (Citing Tr. at 265.) Staff also rejects the testimony of Messrs. Hsieh and Su cited by APM {

} (Citing

Tr. at 522-232, 600.) Staff argues that these witnesses lack credibility. Staff further contends that if MicroJet used another foundry in addition to APM, APM's internal documents would make reference to the other foundry. Staff cites Dr. Pond's testimony that when a manufacturer uses multiple sources for the same part, each supplier "is told that there is more than one source. It is not a big mystery. They know that they are getting part of the volume. And someone else is getting the other part of the volume." (Tr. at 265:18-25.)

Staff further contends that APM knew or should have known that MicroJet printer cartridges incorporating APM ICs were being imported into the United States. APM cites email exchanges {

.} (CX-242C; CX-243C.) Staff

argues that these messages show that APM believed that {

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.} (Citing *id.*) Staff asserts that this evidence establishes that APM knew or should have known that the ICs it manufactured for MicroJet were being used in HP-compatible printer cartridges that were being sold by MicroJet's customers in the United States.

Discussion and Conclusions: The only allegation raised by HP against APM related to importation is that APM sold accused products for importation into the United States. (*See* Order No. 37.) HP does not allege and has never alleged that APM imports infringing products into the United States or sells infringing products within the United States after importation. (*Id.*) With regard to a "sale for importation," a complainant must prove that a respondent sold infringing articles and knew or should have known that those articles would be subsequently exported to the United States. *See Certain Sputtered Carbon Coated Computer Disks & Products Containing Same, Including Disk Drives*, Inv. No. 337-TA-350, Comm'n Opinions (Views of Vice Chairman Watson, and Commissioners Brunsdale and Crawford) (Oct. 27, 1993).

APM has {

} (RIB at 7-8 (citing Tr. at 261:10-262:22; 295:21-296:10); *see also* RRB at 46.) Further, APM's employee Mr. Su testified that {

.} (*See* Tr. at 612:2-613:4.) APM's employee Mr. Hsieh testified that {

.} (*See* Tr. at 542:24-543:13.) Accordingly, I find that that APM sells IC wafers to MicroJet for incorporation into "accused printer products" made by MicroJet.

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I also find that APM devices have actually been imported into the United States. APM does not dispute HP's evidence that the MIPO MP-C57A was imported into the U.S. (See CPX-9 (sample MIPO MP-C57A cartridge); chart in RIB at 20 (“... the MIPO entities imported CPX-2, 9, 10 and 11 into the United States on orders from HP”).) Instead, APM argues that articles ordered by HP cannot satisfy the importation requirement under section 337. This argument has no merit. Jurisdiction by the Commission may lie independently of the actions of HP, APM, or any other party because “an exclusion order operates against goods, not parties.” *Sealed Air Corp. v. Int'l Trade Comm'n*, 645 F.2d 976, 985 (C.C.P.A. 1981). The cases upon which APM relies to argue that a complainant's actions cannot trigger jurisdiction all concern a completely different concept: *personal* jurisdiction in U.S. district courts.³ Those cases do not concern *in rem* actions, actions under section 337, or the jurisdiction of the Commission. Accordingly, those cases are not relevant to the issue of importation and the Commission's jurisdiction in this investigation.

Turning to the issue of whether the accused MIPO articles contain ICs made by APM, Dr. Pond compared a printhead from a MIPO MP-C57A printer cartridge with pictures of APM

³ See *Stewart v. Vista Point Verlag*, No. 99 Civ. 4425 (LAP), 2000 WL 1459839, at *4 (S.D.N.Y. Sept. 29, 2000) (holding that plaintiff's online book order did not confer personal jurisdiction on U.S. district court for copyright lawsuit against bookseller); *Edberg v. Neogen Corp.*, 17 F. Supp. 2d 104, 112 (D. Conn. 1998) (holding that a single sale initiated by plaintiff did not provide U.S. district court with personal jurisdiction over defendant); *Jell-E-Bath Inc. v. Crystal Mud Spa*, No. 05-1703-KI, 2006 WL 1305113, at n. 1 (D. Or. May 8, 2006) (holding that website that appeared in Oregon but generated no sales did not provide U.S. district court in Oregon with personal jurisdiction over defendant); *Regent Lighting Corp. v. Am. Lighting Concept, Inc.*, 25 F. Supp. 2d 705, 711 (M.D.N.C. 1997) (holding that special order by plaintiff's employee did not provide U.S. district court with personal jurisdiction over defendant in Lanham Act claim); *Haggerty Enters., Inc. v. Lipan Indus. Co.*, No 00 C 766, 2001 WL 968592, at *5 (N.D. Ill. Aug. 23, 2001) (holding that U.S. district court had no personal jurisdiction over trademark infringement suit without a showing that defendant had a “distribution plan” that included the forum state); *Chung v. NANA Dev. Corp.*, 783 F.2d 1124, 1127 (4th Cir. 1986) (holding U.S. district court had no personal jurisdiction over defendant in breach-of-contract case); *Native Am. Arts, Inc. v. Moon Raven Int'l. Inc.*, No. 98 C 0434, 1998 WL 325245, at *4 (N.D. Ill. June 10, 1998) (in action based on Indian Arts and Crafts Act and Illinois state law, U.S. district court had no personal jurisdiction over defendant); *ISI Brands, Inc. v. KCC International, Inc.*, 458 F. Supp. 2d 81, 88-89 (E.D.N.Y. 2006) (holding that U.S. district court had no personal jurisdiction over defendant in trademark suit); *McGill Technology Ltd. v. Gourmet Technologies, Inc.*, 300 F. Supp. 2d 501, 506 (E.D. Mich. 2004) (holding that price quotation solicited by plaintiff did not provide U.S. district court with personal jurisdiction over defendant).

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ICs in APM documents. (CX-801C at Q. 522-560.) Dr. Pond found the similarities between the MP-C57A and the pictures in APM's documents to be "striking":

(See, e.g., CX-801C at Q. 540-542; CDX-335C.) Dr. Pond concluded from his comparisons that the IC in the MIPO MP-C57A printer cartridge that he examined originated with APM. (See CX-801C at Q. 560.)

Dr. Pond also compared a printhead from a MIPO MP-C57A printer cartridge with wafers produced by APM in this investigation. (CX-801C at Q. 561-581.) Dr. Pond observed

{ _____ } as shown in the images

below:

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(CDX-345C.) Dr. Pond concluded that the printhead ICs contained in the MP-C57A originate with APM. (CX-801C at Q. 581.)

Dr. Pond's testimony constitutes credible evidence that the IC in the MIPO MP-C57A Dr. Pond examined was manufactured by APM. Because there is no dispute that the MIPO MP-C57A cartridge Dr. Pond examined was imported into the U.S., I find that the accused ICs manufactured by APM have been imported into the U.S. at least in the MIPO MP-C57A cartridge.

APM contends that one cannot definitively establish that two ICs originated at the same foundry simply by conducting a visual comparison of the ICs through an optical microscope, as Dr. Pond did. APM argues that Dr. Pond should have conducted a chemical analysis of the ICs and an examination of the cross-section of each accused IC using a scanning electron microscope. However, Dr. Pond did perform a cross-section analysis on at least one MIPO product (Tr. at 319:8-320:14; RX-46C at Figs. 16, 17), and the results did not dissuade him from his opinion

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that the MIPO product contained an IC made by APM. (CX-801C at Q. 517-18; Tr. at 326:18-327:8.)

Further, while APM criticizes Dr. Pond for failing to perform additional experiments, APM's expert Dr. Clark admitted he did not perform *any* of the tests suggested by APM. (See Tr. at 650:19-653:21, 691:10-13.) Dr. Clark also admitted that he could not have learned anything more by examining the ICs in the manner that APM now suggests:

Q. Oh, I understand. I'm sorry. So it was important for you to see the report that Dr. Pond put in, but not to analyze [the cartridges Dr. Pond examined] yourself?

A. Well, I believe my job here is to rebut Dr. Pond's report. So I wouldn't - I don't think I would contribute anything new by examining them myself.

(Tr. at 653:14-21.) Further, Dr. Clark admitted that {

}

{

}

(Tr. at 692:17-693:3.) Accordingly, APM's argument that Dr. Pond should have conducted additional tests is unconvincing.

APM is also unpersuasive when it argues that Dr. Pond's {

} Dr. Pond testified

that it was possible that APM's manufacturing process produces variations among different batches of the same kind of wafer. (Tr. at 324:7-21.) Mr. Su also admitted that {

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} (CX-826C; CX-827C; Tr. at 622:17-22.) APM did not dispute Mr. Su's testimony on this point. HP further argues that the APM specification from which Dr. Pond's analysis differed is outdated. (See RX-101C (dated 2003).) APM did not dispute HP's argument about the date of the APM specification.

APM's claim that MicroJet *might* use multiple foundries to produce ICs identical to those made by APM is also unconvincing. APM argues {

.} (See Tr. at 522:3-22;

537:1-3.) However, while Mr. Hsieh testified that {

} (Tr. at 522:18-22.) In fact, Mr. Hsieh claimed {

.} (Tr. at 537:7-21.) Further, Mr. Hsieh stated that

{ .}

(Tr. at 537:1-6.) Mr. Hsieh provided no basis in his testimony for concluding that the things he allegedly heard were accurate reflections of MicroJet's actual practices. Additionally, Mr.

Hsieh's testimony was focused on { .} (See Tr. at 537:1-

538:4.) Mr. Hsieh did not testify {

.} Thus,

APM did not present any credible evidence that MicroJet used another IC supplier during the relevant timeframe.

Further, APM is wide of the mark when it argues that {

} HP presented evidence that identical ICs are not likely to be produced at different foundries using identical masks because differences in the foundries' production lines would

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necessarily require different masks based on, *e.g.*, “different targets” and “different biases” for different foundry equipment. (Tr. at 159:12-160:19, 360:8-362:12.) Further, APM’s employee Mr. Su admitted that {

} (Tr. at 586:15-588:16.)

Dr. Pond found none of these differences in the products he examined. (Tr. at 362:17-21, 363:21-364:14.) Accordingly, the record will not support a finding that during the relevant time period MicroJet used multiple foundries to make its printhead ICs.

Next, I find that HP has met its burden to show by a preponderance of the evidence that APM knew or should have known that MicroJet printer cartridges incorporating ICs made by APM would be subsequently imported into the United States. Email exchanges between APM’s employee Mr. Pu and Mr. Hsieh on March 10, 2010, reflect APM’s understanding {

} (*See* CX-242C, CX-243C.) In one exchange, Mr. Hsieh

forwarded to Mr. {

.} (CX-242C.)

Mr. Pu wrote in response:

{

}

(*Id.*) Mr. Hsieh then responded, {

} (*Id.*)

A second email exchange between Mr. Pu and Mr. Hsieh on the same day also indicates that {

.} Mr. Pu

wrote to Mr. Hsieh:

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{

}

(CX-243C.) Mr. Hsieh responded, {

} (*Id.*)

The emails quoted above demonstrate that, at least by March 10, 2010, APM was

{

}

(*See id.*; *see also* Tr. at 498:13-23.) These emails demonstrate that APM knew that the ICs it sold to MicroJet were incorporated into HP-compatible cartridges that would subsequently be imported into the United States.

APM's employee Mr. Hsieh testified {

.} (Tr. at 465:9-466:2.)

Notwithstanding his protestations of ignorance, {

} (Tr. at 460:19-25, 535:6-17.) {

.} (*Id.* at 544:4-7.) Contrary to APM's assertion, {

}

Further, the evidence shows that {

}, as APM contends in its reply brief. {

} (Tr. at 536:7-10.) {

} As noted above, Mr. Hsieh corresponded with Mr.

Pu about {

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} (CX-242C; CX-243C.) Further, in email correspondence regarding MicroJet's concerns

{

} (CX-812C.) Mr.

Hsieh also received an email discussing {

} (CX-88C.) The foregoing evidence demonstrates that Mr.

Hsieh knew that MicroJet used APM's wafers in the manufacture of inkjet printer cartridges.

Based upon the foregoing, I find that Mr. Hsieh's credibility on this issue is impeached.

APM also relies on the testimony of Ruben Pena, who stated that MicroJet had a company policy against shipping products to the United States. However, Mr. Pena's testimony relates to the time of his employment at MicroJet, which ended in 2004. Accordingly, Mr. Pena's testimony about MicroJet's policies in 2004 and prior is not a reliable indicator of MicroJet's activities and APM's knowledge in March 2010, the time when Mr. Hsieh and Mr. Pu sent messages discussing the effect of MicroJet's litigation on APM's sales. (CX-242C; CX-243C.) APM's errs when it relies on Mr. Pena's outdated understanding of MicroJet's policies to claim that it did not know that MicroJet products would subsequently be imported into the United States.

In view of the foregoing evidence, I find that HP has met its burden to establish by a preponderance of the evidence that, at least as of March 10, 2010, APM had actual knowledge that the ICs it sold to MicroJet would subsequently be imported into the United States.

Assuming *arguendo* that APM is found to lack actual knowledge that the products it sold MicroJet would subsequently be imported into the U.S., I find that APM should have known that fact. The emails between Mr. Pu and Mr. Hsieh (CX-242C; CX-243C) indicate that {

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.} Upon receiving such notice, APM had a duty to investigate whether or not its products were in fact being imported into the United States. The evidence of importation discussed above shows that if APM would have undertaken a reasonable investigation into whether its products were being imported into the U.S., APM would have found that its products were, in fact, being imported into the United States. I therefore conclude that APM is imputed with the knowledge that the products it sold MicroJet would be imported into the United States.

Imputing knowledge of subsequent importation to APM is justified in these circumstances. The Federal Circuit has provided guidance about imputing knowledge in an analogous circumstance. *Wanlass v. General Electric Co.*, 148 F.3d 1334 (Fed. Cir. 1998) concerned a laches defense raised in a district court patent infringement suit. The Federal Circuit held that the period of the plaintiff's delay was measured from the time the plaintiff had "actual or constructive knowledge of the defendant's potentially infringing activities." *Id.* at 1337. In evaluating whether or not knowledge of an infringing activity should be imputed to the plaintiff, the Federal Circuit noted that "[t]he Supreme Court has consistently imputed to parties who failed to examine readily available information the knowledge contained in it and the results of inquiries that the knowledge would have motivated a reasonable man to conduct." *Id.* at 1338-1339. The Federal Circuit cited Supreme Court cases about imputed knowledge in a variety of areas of the law, and opinions from the Court of Customs and Patent Appeals that imputed knowledge in patent actions. The doctrine of imputed knowledge discussed in *Wanlass* is applicable in this investigation. APM cannot claim to lack knowledge about the importation of MicroJet products into the United States when a reasonable investigation undertaken in March 2010 would have readily revealed that fact.

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Subject Matter Jurisdiction With Respect to PTC's Products

HP's Position: HP seeks a finding that PTC imported infringing articles in violation of section 337. HP contends that its employees observed PTC branded clones on display at a PTC booth in the January 2010 Consumer Electronics show in Las Vegas, Nevada. (Citing CX-800C at Q. 46-48, 66-73; Tr. at 226:9-227:27; CX 35.) HP argues that the PTC products in Las Vegas have the same characteristics as MicroJet products that were shipped by MicroJet to {
} (Citing CX-800C at Q. 79; CX-800C at 14; CX-801C at 39.)

APM's Position: As noted above, APM criticizes HP's evidence relating to the Consumer Electronics show in Las Vegas, Nevada. APM responds that CX-751 is merely a photograph of a booth rented by PTC and CX-35 is merely a blurred picture showing two cartridge-like devices. APM argues that HP never purchased the devices in the photograph and HP's expert never examined those devices. Therefore, APM contends, there is no evidence that the products in the trade show photograph are the same as the PTC product that HP's expert examined. (Citing CX-801C at Q. 129-130.) APM further argues that the PTC products that HP actually examined were not imported into the U.S.; APM contends they were purchased by HP in Europe. (Citing Tr. at 209:14-22; CX-800C at Q. 74.)

Staff's Position: Staff contends that PTC imported printer cartridges identified as HC-32, HC-22 and HC-22 XL into the U.S. for display at a trade show in Las Vegas, Nevada. (Citing CX-800 (Barkley Witness Statement ¶ 48); CX-35; CX-36). However, Staff asserts that there is no evidence that the PTC printer cartridge that Dr. Pond examined (model PTC-6657, CPX-7) was imported into the United States.

Discussion and Conclusions: HP has presented credible evidence, gathered from persons present at the Consumer Electronics trade show in Las Vegas, that PTC imported printer

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cartridges with labels of “21” and “21XL” into the United States. (CX-800C at Q. 45-49, 66, 73, 74; Tr. at 226:9-228:13; CX-35.) The PTC products observed in Las Vegas have the same unique external characteristics as known MicroJet products. (*Id.*; *see also* Tr. at 231:14-234:12; CX-800C at Q. 73, 74, 89, 98.) Additionally, HP has shown by a preponderance of the evidence that the PTC cartridges at the trade show contain ICs made by APM. Dr. Pond examined cartridges obtained from PTC in Europe that have the same external characteristics as those observed at the Las Vegas trade show. (CPX-7; CX-801C at Q. 130, 131.) He compared ICs in the PTC cartridges obtained in Europe with known attributes of cartridges made by MicroJet and ICs made by APM. (CX-801C at Q. 540 *et seq.*) Dr. Pond determined that the PTC cartridges contain the accused ICs made by APM. (CX-801C at Q. 581.)

While APM criticizes the quality of this evidence, APM presents no evidence that actually contradicts HP’s evidence about the characteristics of the PTC products at the trade show. Accordingly, I find that HP has met its burden to show by a preponderance of the evidence that PTC imported accused products into the United States, that those products were manufactured by MicroJet, and that those products contain ICs made by APM.

Further, the Commission Rules state that certain failures to comply with Commission procedures “may provide a basis for the presiding administrative law judge or the Commission to draw adverse inferences and to issue findings of fact, conclusions of law, determinations (including a determination on violation of section 337 of the Tariff Act of 1930), and orders that are adverse to the party that fails to act.” *See* 19 C.F.R. § 210.17. These failures to act include “[f]ailure to appear at a hearing before the administrative law judge after filing a written response to the complaint” and “[f]ailure to file a brief or other written submission requested by the administrative law judge or the Commission during an investigation or a related proceeding.”

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19 C.F.R. § 210.17(d), (e). An administrative law judge may take action under this Rule either *sua sponte* or in response to a motion by a party. 19 C.F.R. § 210.17.

PTC failed to appear at the hearing in this investigation and failed to file post-hearing briefs. Accordingly, I find that it is appropriate to draw the adverse inferences that PTC imported accused products into the United States, that those products were manufactured by MicroJet, and that those products contain ICs made by APM. *See* 19 C.F.R. § 210.17(d), (e). Further, by failing to file a post-hearing brief, PTC waived any arguments that it may have had concerning any issue in this investigation. *See* Ground Rule 11.1.

I note that my finding that APM sold products for importation expressly does not depend upon any adverse inference drawn against PTC. Sufficient independent evidence exists to conclude that APM knew or should have known that the ICs it sold MicroJet would subsequently be imported into the United States.

Subject Matter Jurisdiction With Respect to MIPO Products

HP's Position: Although HP argues that the domestic MIPO entities SinoTime and MIPO America violated section 337 by importing infringing products, "HP does not ask the [administrative law judge] to enter a formal finding that the domestic Mipos [*sic*] are in violation of Section 337, nor does HP seek any remedy against these Respondents, as they settled." (CIB at 71.) However, HP apparently seeks a finding that the foreign MIP entities violated section 337 by importing infringing products into the U.S. through the domestic MIPO entities and/or by selling infringing products to the domestic MIPO entities for importation into the U.S. (Citing CX-5; CX-24; CX-47; CX-49.)

APM's Position: APM argues that the MIPO products that HP examined were imported into the United States as a result of an order placed by HP. (Citing Tr. at 227:12-228:14.) APM

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argues that the Commission cannot exercise subject matter jurisdiction over the MIPO products as a matter of law because HP initiated the transaction that lead to the MIPO products entering the United States.

Staff's Position: Staff contends that a MIPO accused cartridge with model number MPC6657A was imported into the U.S. (Citing CPX-9; CX-800C at Q. 71,121; CX-30; CX-31.)

Discussion and Conclusions: In Order No. 16, I granted an unopposed motion by MIPO Science & Technology Co, Ltd. and MIPO Technology Limited to terminate the investigation as to those two foreign MIPO parties based on a stipulation to a consent order. The stipulation included a statement that the stipulation was for settlement purposes only and did not constitute an admission by MIPO that an unfair act has been committed. (Stipulation to Consent Order at ¶ 11.) Commission Rule 210.21(c)(3)(i)(C) specifically provides that a consent order stipulation may contain a statement that it is for settlement purposes only and does not constitute an admission that an unfair act has been committed. In Order No. 17, I granted a motion to terminate the investigation as to respondent SinoTime Technologies, Inc. d/b/a All Colors on the basis of a settlement agreement. In Order No. 18, I granted a motion to terminate the investigation as to respondent Mextec d/b/a MIPO America Ltd. on the basis of a settlement agreement.

The orders noted above became the final determinations of the Commission with respect to the MIPO parties. Because this investigation has been terminated with respect to the MIPO parties, I decline to make any further findings of fact or conclusions of law in this initial determination that may be construed as adverse to those parties. The Commission has a long-standing policy against finding a violation by settling parties. *Certain Plastic Molding Machines*, Inv. No. 337-TA-462, U.S.I.T.C. Pub. No. 3609 (July 2003), Comm'n Op. at 18-21.

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Subject Matter Jurisdiction With Respect to MicroJet Branded Products

HP's Position: HP apparently seeks a finding that MicroJet knew or should have known that its sales to the foreign MIPO entities would result in the importation of its products into the United States. (CIB at 72-73.)

APM's Position: APM argues that the MicroJet branded products that HP actually examined were not imported into the U.S.; APM contends they were purchased by HP{ .} (Citing CX-800C at Q. 75-77; CX-228C; Tr. at 64:20-23). Therefore, APM argues, HP has not demonstrated that the Commission has subject matter jurisdiction with respect to the MicroJet branded products.

Staff's Position: Staff contends that there is no evidence that any MicroJet branded cartridges were imported into the United States. (Citing CX-800C at Q 75.) However, Staff contends that certain MIPO branded cartridges, including model MP-57A, originate from MicroJet. (Citing *id.* at Q. 91-98.) Thus, Staff concludes that cartridges manufactured by MicroJet have been imported into the United States.

Discussion and Conclusions: In Order No. 9, I found MicroJet in default. The initial determination in that order has become the final determination of the Commission. Under Commission Rule 210.16(c), the allegations against MicroJet are assumed true as a result of its default. HP has alleged that MicroJet knew or should have known that the products it sold to the foreign MIPO entities would be imported into the United States, and I will assume that allegation to be true under Rule 210.16(c). Therefore, the Commission has subject matter jurisdiction over HP's claims with respect to products made by MicroJet.

Additionally, I have found that HP has presented credible evidence that inkjet cartridges originating from MicroJet have been imported into the United States, as least in the form the

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PTC cartridges shown at the Consumer Electronics trade show in Las Vegas and in the form of the MIPO products that HP ordered online and had shipped to U.S. addresses. Thus, even without assuming facts under Commission Rule 210.16, I find that HP has shown by a preponderance of the evidence that cartridges originating from MicroJet have been imported into the United States. Therefore, the Commission has subject matter jurisdiction over all of HP's claims involving printhead cartridges manufactured by MicroJet under this reasoning as well.

I further note that the assumed facts regarding MicroJet may not be used against a non-defaulting party such as APM. *See Certain Ink Cartridges and Components Thereof*, Inv. No. 337-TA-565, Comm'n Op. at 59 (Nov. 7, 2007). I expressly do not rely on any assumed facts regarding MicroJet to find that the Commission has subject matter jurisdiction over HP's claims involving APM. I have provided above several independent bases for subject matter jurisdiction with respect to APM.

B. Personal Jurisdiction

APM

APM responded to the complaint and notice of investigation, participated in the investigation, made an appearance at the hearing, and submitted post-hearing briefs. Thus, I find that APM submitted to the personal jurisdiction of the Commission. *See Certain Miniature Hacksaws*, Inv. No. 337-TA-237, Initial Determination (Oct. 15, 1986).

PTC

PTC responded to the complaint and notice of investigation. Therefore, I find that PTC submitted to the personal jurisdiction of the Commission. *See Certain Miniature Hacksaws*, Inv. No. 337-TA-237, Initial Determination (Oct. 15, 1986).

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MIPO Science & Technology Co, Ltd. and MIPO Technology Limited have specifically stipulated that the Commission has personal jurisdiction over them. (Order No. 16.) Further, all of the MIPO parties participated in this investigation at least to the extent of entering into the consent order and settlement agreements described in Order Nos. 16, 17, and 18. Thus, I find that the MIPO parties submitted to the personal jurisdiction of the Commission. *See Certain Miniature Hacksaws*, Inv. No. 337-TA-237, Initial Determination (Oct. 15, 1986).

MicroJet

As noted in Order No. 9, counsel for MicroJet filed a Notice of Appearance in this investigation on August 19, 2010. Accordingly, I find that MicroJet has submitted to the personal jurisdiction of the Commission in this investigation. *See Certain Miniature Hacksaws*, Inv. No. 337-TA-237, Initial Determination (Oct. 15, 1986).

C. In Rem Jurisdiction

The Commission has *in rem* jurisdiction over the products that have been imported into the United States. *See Sealed Air Corp. v. United States Int'l Trade Comm'n*, 645 F.2d 976, 985 (C.C.P.A. 1981). HP has shown by a preponderance of the evidence that the accused MIPO products were imported into the United States. (*See, e.g.*, Tr. at 227:12-228:13.) Thus, the Commission has *in rem* jurisdiction over those accused products.⁴

Further, I have found that the accused PTC products have been imported into the U.S. at least when those products were displayed at the Consumer Electronics trade show in Las Vegas.

⁴ This finding should not be construed as an adverse finding against MIPO. As noted above, the MIPO entities have settled with HP and the Commission has a long-standing policy against finding a violation by settling parties. *Certain Plastic Molding Machines*, Inv. No. 337-TA-462, U.S.I.T.C. Pub. No. 3609 (July 2003), Comm'n Op. at 18-21. A finding of *in rem* jurisdiction concerns products, not persons or corporate entities. In any event, MIPO Science & Technology Co, Ltd. and MIPO Technology Limited have specifically stipulated that the Commission has *in rem* jurisdiction over the accused products alleged to have been imported by them. (Order No. 16.)

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I have also found that the accused PTC products were manufactured by MicroJet and contain ICs made by APM. Accordingly, I find that the Commission has *in rem* jurisdiction over the accused products imported by PTC, over the accused products manufactured by MicroJet, and over accused ICs made by APM that are contained with MicroJet products.

III. CLAIM CONSTRUCTION

A. Applicable Law

“An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996) (citation omitted). Claim construction “is a matter of law exclusively for the court.” *Id.* at 970-71. “The construction of claims is simply a way of elaborating the normally terse claim language in order to understand and explain, but not to change, the scope of the claims.” *Embrex, Inc. v. Serv. Eng’g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000). “[O]nly those [claim] terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Claim construction focuses on the intrinsic evidence, which consists of the claims themselves, the specification, and the prosecution history. *See generally Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*). The Federal Circuit in *Phillips* explained that in construing terms, courts must analyze each of these components to determine the “ordinary and customary meaning of a claim term,” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313.

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention

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to which the patentee is entitled the right to exclude.” *Id.* at 1312 (citations omitted). “Quite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Id.* at 1314. For example, “the context in which a term is used in the asserted claim can be highly instructive,” and “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.” *Id.*

“[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (citation omitted). “The longstanding difficulty is the contrasting nature of the axioms that (a) a claim must be read in view of the specification and (b) a court may not read a limitation into a claim from the specification.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1117 (Fed. Cir. 2004). The Federal Circuit has explained that there are certain instances when the specification may limit the meaning of the claim language:

[O]ur cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs. In other cases, the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor. In that instance as well, the inventor has dictated the correct claim scope, and the inventor’s intention, as expressed in the specification, is regarded as dispositive.

Phillips, 415 F.3d at 1316.

In addition to the claims and the specification, the prosecution history should be examined if in evidence. “The prosecution history... consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent. Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” *Id.* at 1317 (citation omitted). “[T]he prosecution history can

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often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, including dictionaries, inventor testimony, expert testimony and learned treatises. *Id.* at 1317. Extrinsic evidence is generally viewed “as less reliable than the patent and its prosecution history in determining how to read claim terms[.]” *Id.* at 1318. “The court may receive extrinsic evidence to educate itself about the invention and the relevant technology, but the court may not use extrinsic evidence to arrive at a claim construction that is clearly at odds with the construction mandated by the intrinsic evidence.” *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 977 (Fed. Cir. 1999).

B. The ‘598 Patent

1. “Printhead”

HP’s Position:⁵ HP contends that the term “printhead” in the preamble of claim 1 is not a limitation.

HP states that the preamble recites a “printhead for an inkjet printer,” which is merely a statement of intended use. HP argues that the law is clear that for an apparatus claim like claim 1 of the ’598 patent, statements of intended use do not limit the claim – particularly where, as here, the preamble fails to provide the antecedent basis for any subsequent limitations of the claim.

⁵ HP’s post-hearing brief contains references to its pre-hearing brief to support its positions. For example, when addressing “printhead,” HP states “[f]or the reasons stated in HP’s pre-trial brief, HP respectfully submits that the preamble does not limit the claim.” (CIB at 15.) HP’s attempt to incorporate by reference arguments from its pre-hearing brief violates Ground Rule 11.1, which requires the parties to address all of the pertinent issues in their initial post-hearing briefs. In addition, I reminded the parties at the end of the hearing that their initial post-hearing briefs should include all arguments that they wish to raise. (Tr. at 704:16-705:21.) Thus, any arguments that HP attempts to incorporate by reference from its pre-hearing brief that are not separately addressed in the post-hearing briefing will not be considered.

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HP states that the body of the claim recites a structurally complete integrated circuit – and nothing more. HP notes that Dr. Pond testified directly to this point when he opined that “the term ‘printhead’ does not impart any structure in addition to the elements recited after the preamble.” (Citing CX-801C at 363.) HP argues that the preamble merely recites the intended use for this device, and thus does not limit the claim.

HP notes that APM and Staff believe that the preamble of claim 1 serves as a limitation based on the title of the ‘598 patent, the abstract of the ‘598 patent, the testimony of Mr. Torgerson, and HP’s descriptions of the technology in its Complaint. (Citing RIB at 51-52, 57; SIB at 9-13; Tr. at 101:21-103:3.) HP argues that these all constitute statements of intended use and do not serve to limit the claim.

HP argues that the principle of claim differentiation suggests that “printhead” in the preamble of claim 1 is not a claim limitation. (Citing Tr. at 61:17-62:15.) HP notes that in claim 10, the drafting attorney meted out “a printhead fluidically coupled to said ink storage reservoir and electrically coupled to said electrical interconnect circuit whereby ink drops are ejected from said printhead” and then claimed the components comprising the printhead. HP explains that the drafting attorney defined the structures making up the printhead in claim 10 but did not do so in claim 1. Accordingly, HP submits that one of skill in the art would have recognized that a printhead was claimed in claim 10 but not in claim 1.

APM’s Position: APM contends that “printhead” serves as a claim limitation in claim 1.

APM contends that “printhead” means “a device including at least an orifice plate, an ink barrier and a thin film substructure for the purpose of dispensing ink onto a print media.”

APM notes that the ‘598 patent specification is replete with references to printheads, including the title of the patent itself, the “Background of the Invention,” and the “Summary of

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the Invention.” APM asserts that the title of the ‘598 patent, “Shared Multiple Terminal Ground Returns for an Inkjet Printhead,” clearly suggests that the invention is limited to an inkjet printhead. APM states that in the “Background of the Invention,” the inventor describes the subject matter of the invention with the statement: “The present invention relates generally to inkjet printing devices, and more particularly to an *inkjet printhead for thermal inkjet printing devices...*” (Citing JX-1 at 1:5) (Emphasis added). APM states that the “Summary of the Invention” section also confirms that the invention is about printheads: “A *printhead* for an inkjet printer includes a substrate upon which is disposed a plurality of heater resistors.” (Citing JX-1 at 2:65-66) (Emphasis added).

APM claims that it is precisely this improved inkjet printhead, and not some other invention, that the ‘598 patent seeks to protect. According to APM, absent “printhead,” the ‘598 claim body simply describes a well-known electronic circuitry scheme involving shared ground returns – which is not the appropriate subject matter of the claimed invention.

APM states that an inkjet of the type being considered in the ‘598 patent requires at least a heater resistor, a firing chamber, an ink source and an orifice plate. APM notes that the claim body that describes only a substrate, heater resistors, and various electrical connections is not sufficient by itself to be patentable since absent a printhead comprising an ink drop generating device, the product described by the claim body would not produce a useful and concrete result, *i.e.*, it would not dispense ink. APM claims that the preamble language “printhead” limits the invention because it recites an essential, if not the most important, structure of the ‘598 patented invention.

APM says that “heater resistor” is a term of art in the thermal inkjet printing industry and reference to “printhead” is necessary to give that term a proper context. APM argues that the

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term set forth in the preamble provides the context for the entire '598 invention and is not a mere statement of intended use as claimed by HP. APM asserts that treating printhead as merely a statement of intended use would infinitely expand the scope of the '598 patent to include every circuitry design that utilizes a shared common ground scheme.

APM argues that Mr. Torgerson's testimony at the hearing supports the conclusion that "printhead" is a limitation. APM asserts that Mr. Torgerson's testimony demonstrates that the claim limitations in the '598 patent were known to electrical engineers in 1999. (Citing Tr. at 128:16-131:13.) APM claims that Mr. Torgerson stated that while the individual claim limitations in the '598 patent were known electrical engineering concepts in August 1999, these concepts were not applied to inkjet printheads. APM argues that Mr. Torgerson conceded that printhead is a claim limitation that the '598 patent relied upon to overcome the novelty hurdle.

APM states that all of the parties' proposed constructions for "printhead" require that the printhead be able to dispense ink onto a print media. APM argues that its proposed construction is supported by the claims and specification of the '598 patent. (Citing JX-1 at 1:28-33.) APM also argues that HP conceded that APM's proposed construction is correct in HP's Complaint. (Citing Complaint at pg. 7.)

APM notes that HP construes "printhead" to mean "an ink drop generating device." APM states that an "ink drop generating device," means a device that generates ink drop. APM claims that in order to generate an ink drop, a device would require at least a drop generator. Accordingly, APM states that HP's argument that a drop generator is not part of a printhead simply cannot reconcile with its own proposed construction that a printhead is an ink drop generating device.

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In its reply brief, APM argues that HP misapplies the doctrine of claim differentiation in an attempt to argue that “printhead” is not a claim limitation. APM argues that the inclusion of “printhead” in the body of claim 10 actually reinforces the conclusion that the “printhead” of claim 1 is a limitation.

Staff’s Position: Staff contends that “printhead” in the preamble of claim 1 of the ‘598 patent serves as a limitation. Staff contends that “printhead” means “the element of a printer that applies the mark or image to the print media.”

Staff asserts that the title of the patent, Background of the Invention, and Summary of the Invention make clear that the invention is directed to printheads. (Citing JX-1 at 1:5-17, 2:65-66.) Staff claims that the specification is replete with references to printheads with no indication therein that the inventors intended their invention to have application beyond the use in inkjet printheads. Staff notes that Dr. Pond testified that the ‘598 patent “relates to an inkjet printhead for thermal printing devices that reduces the number of interconnections. (Citing CX-801C at Q. 76.) Staff believes that the ‘598 patent indicates that the preamble does not merely state a purpose or intended use but is rather an additional limitation to the claim’s scope.

Staff argues that its proposed construction is supported by the ‘598 patent specification. (Citing JX-1 at 1:23-30; CX-801C at Q. 64.) Staff believes that HP’s construction is erroneous in that the printhead is not a “device” which itself can generate the ink drop (rather other components of the printer cartridge are necessary to perform this function). Staff asserts that APM’s proposed construction suffers this same shortcoming. Staff states that claim 10’s recitation of a printhead suggests that the further structural components included in APM’s proposed construction are not necessarily descriptive of all printheads.

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Construction to be applied: “the element of a printer that applies the mark or image to the print media.”

Claim 1 of the ‘598 patent recites the following:

1. A printhead for an inkjet printer, comprising:

a substrate;

a plurality of heater resistors disposed on said substrate and electrically arranged into a first group and a second group;

a first electrical conductor disposed on said substrate, coupled to each heater resistor in said first group, and terminating in a first terminal disposed on said substrate whereby electrical current is sourced to each heater resistor in said first group;

a second electrical conductor disposed on said substrate, coupled to each heater resistor in said second group, and terminating in a second terminal disposed on said substrate whereby electrical current is sourced to each heater resistor in said second group; and

a third electrical conductor disposed on said substrate, coupled to each heater resistor in both said first group and said second group, and terminating in third and fourth terminals disposed spaced apart from each other on said substrate whereby electrical current is returned to complete an electrical circuit.

(JX-1.) The term “printhead” also appears in the preamble of dependent claims 2-6 and 8-9.

(*Id.*) “Printhead” appears in the body of independent claim 10. (*Id.*)

A patent claim is typically divided into three sections: (1) the preamble; (2) the transition; and (3) the body. *Bristol-Myers Squibb Co. v. Immunex Corp.*, 86 F. Supp. 2d 447, 450 (D.N.J. 2000). “The preamble is an introductory phrase that may summarize the invention, its relation to the prior art, or its intended use or properties [i]t may also constitute a limitation.” *Id.* (quoting Donald A. Chisum, *Patents* § 8.06 (1994)).

“‘Comprising’ is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the

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scope of the claim.” *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997). Thus, a printhead that satisfies claim 1 must contain the listed elements, but may contain additional, unnamed elements.

The parties dispute whether or not the term “printhead” in the preamble serves as a claim limitation. Whether to treat a claim preamble as a limitation is a determination made after a review of the entire patent. *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). In *Catalina*, the Federal Circuit stated:

In general, a preamble limits the invention if it recites essential structure or steps, or if it is “necessary to give life, meaning, and vitality” to the claim. Conversely, a preamble is not limiting “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.”

Id. (citations omitted). The court went on to explain that “a preamble generally is not limiting when the claim body describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention.” *Id.* at 809. The court explained that there was no litmus test that defines when a preamble limits claim scope, but it did provide some “guideposts” to assist in the analysis. *Id.* at 808. Some of the relevant guideposts are:

- “[D]ependence on a particular disputed preamble phrase for antecedent basis may limit claim scope because it indicates a reliance on both the preamble and claim body to define the claimed invention.”
- “[W]hen the preamble is essential to understand limitations or terms in the claim body, the preamble limits claim scope.”
- “[W]hen reciting additional structure or steps underscored as important by the specification, the preamble may operate as a claim limitation.”
- “[C]lear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention.”

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- “[P]reamble language merely extolling benefits or features of the claimed invention does not limit the claim scope without clear reliance on those benefits or features as patentably significant.”
- “[P]reambles describing the use of an invention generally do not limit the claims because the patentability of apparatus or composition claims depends on the claimed structure, not on the use or purpose of that structure.”

Id. at 808-809.

The invention at issue in *Catalina* was a system for distributing coupons to consumers through kiosks. The court had to determine whether the phrase “located at predesignated sites such as consumer stores” was a limitation when it appeared in the preamble. *Id.* at 807-808. The court found that the phrase was not a claim limitation. The court examined the specification and found that the location of the kiosks was not an essential feature of the invention. *Id.* at 810.

The applicants did not rely on the preamble to distinguish the invention from the prior art during prosecution. *Id.* Importantly, the court found that the claim was complete without the preamble:

Moreover, deletion of the disputed phrase from the preamble of Claim 1 does not affect the structural definition or operation of the terminal itself. The claim body defines a structurally complete invention. The location of the terminals in stores merely gives an intended use for the claimed terminals.

Id.

In *Corning Glass Works v. Sumitomo Electric U.S.A., Inc.*, 868 F.2d 1251, 1256 (Fed. Cir. 1989), the claim preamble was “[a]n optical waveguide comprising.” The court found that the preamble served as a limitation because the specification was clear that the invention was limited to fibers working as waveguides. As the court explained: “[t]he invention is restricted to those fibers that work as waveguides as defined in the specification, which is not true with respect to fibers constructed with the limitations of paragraphs (a) and (b) only.” *Id.* at 1257.

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In *Poly-America, L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1309-1310 (Fed. Cir. 2004), the issue was whether or not the term “blown-film” in the claim preamble constituted a claim limitation.⁶ In holding that the language constituted a limitation, the court explained:

We agree with Poly-America that the phrase “blown-film” is a limitation of the claims of the '047 patent. The specification is replete with references to the invention as a “blown-film” liner, including the title of the patent itself and the “Summary of the Invention.” The phrase is used repeatedly to describe the preferred embodiments, and the entire preamble “blown-film textured liner” is restated in each of the patent’s seven claims. Our analysis shows that the inventor considered that the “blown-film” preamble language represented an important characteristic of the claimed invention.

Id. at 1310.

Based on the evidence in the record, I find that the term “printhead” in the preamble of the asserted claims constitutes a claim limitation. As was the case in *Poly-America*, the specification is replete with references to the invention as a printhead. 383 F.3d at 1310. The title of the '598 patent is “Shared multiple terminal ground returns for an inkjet printhead” The “Background of the Invention” expressly states that the “present invention” relates to “an inkjet printhead:”

The present invention relates generally to inkjet printing devices, and more particularly to an inkjet printhead for thermal inkjet printing devices that reduces the number of interconnections providing electrical connection to the drop ejector heater resistors with out sacrificing reliability.

(JX-1 at 1:5-9) (emphasis added).

The first sentence of the “Summary of the Invention” recites: “[a] printhead for an inkjet printer includes a substrate upon which is disposed a plurality of heater resistors.” (JX-1 at 2:66-67.) The Detailed Description of a Preferred Embodiment is devoted to describing the use of the invention in the context of a printhead. (See, e.g., JX-1 at 3:47-10:26.) The specification

⁶ The full preamble recited a “blown-film textured liner.”

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demonstrates a clear focus on printheads, and there is no indication from the specification that invention was intended to extend beyond printheads.

The term “printhead” is not merely defining an intended use for the invention, as HP argues. Without the “printhead” limitation, claim 1 is comprised of a substrate, a plurality of heater resistors disposed on the substrate in a particular manner, and certain electrical connections to the heater resistors. The elements in the body of the claim provide no indication that the invention is directed to inkjet printing, even though the ‘598 patent specification makes it clear that the invention is directed to inkjet printing. (JX-1 at 1:5-9, 2:66-67.) Here the term “printhead” is essential to understand limitations or terms in the claim body. *Catalina* at 808. The “printhead” limitation is also necessary to give life, meaning, and vitality to claim, and to ensure that the claim defines a structurally complete invention. *See Corning Glass Works*, 868 F.2d at 1257. Therefore, the preamble limits claim scope.

In asserting that “printhead” is not a claim limitation, HP raises a claim differentiation argument with respect to claim 10. Claim 10 recites “[a] print cartridge for an inkjet print apparatus, comprising,” *inter alia*, “a printhead fluidically coupled to said ink storage reservoir and electrically coupled to said electrical interconnect circuit whereby ink drops are ejected from said printhead...” Claim 10 then defines the printhead to comprise a substrate, a plurality of heater resistors, and electrical conductors, similar to claim 1.⁷ HP argues that “the drafting attorney defined the structures making up the printhead in claim 10 but did not do so in claim 1.” (CRB at 6.)

“The doctrine of claim differentiation ‘create[s] a presumption that each claim in a patent has a different scope.’” *Versa Corp. v. Ag-Bag Int’l Ltd.*, 392 F.3d 1325, 1330 (Fed. Cir. 2004)

⁷ Of note, claim 1 requires two groupings of heater resistors, while claim 10 requires at least eight groupings of heater resistors.

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(quoting *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998)).

“In the most specific sense, ‘claim differentiation’ refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim.” *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006).

As APM correctly notes, HP’s argument misapplies the doctrine of claim differentiation. Claims 1 and 10 are clearly of different scope, even if the “printhead” preamble of claim 1 is held to constitute a claim limitation. HP argues that because “printhead” is called out in the claim body of claim 10, it cannot possibly be a limitation when found in the preamble of claim 1. HP cites no law to support such a proposition, and I do not concur with that position. To the contrary, the fact that claim 10 needs to call out a “printhead” comprising various elements, instead of just simply listing those elements as separate claim limitations, demonstrates the importance of the term “printhead” in understanding the invention.

Only APM and Staff offer proposed constructions for “printhead.” APM asserts that a “printhead” is “a device including at least an orifice plate, an ink barrier and a thin film substructure for the purpose of dispensing ink onto a print media.” APM offers two bases to support its construction. First, it cites to the following passage from the specification of the ‘598 patent:

Such cartridges typically include a printhead having an orifice member or plate that has a plurality of small nozzles through which the ink drops are ejected. Beneath the nozzles are ink firing chambers, enclosures in which ink resides prior to ejection by an ink ejector through a nozzle. Ink is supplied to the ink firing chambers through ink channels that are in fluid communication with an ink reservoir, which may be contained in a reservoir portion of the print cartridge or in a separate ink container spaced apart from the printhead.

(JX-1 at 1:27-36.) This passage in no way clearly defines the claimed printhead. *See Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004) (“Absent a clear

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disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language.”); *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (explaining that a “claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history.”) The passage appears in the “Background of the Invention” and is describing only the typical configuration of a thermal inkjet printer. (JX-1 at 1:27-36.) I find no clear indication from this equivocal passage that the meaning of “printhead” is intended to be limited in the patent based on the description of a typical inkjet printer configuration.

Second, APM relies on a passage from HP’s Complaint in this investigation. (Complaint at ¶ 4.1.) In the cited passage, HP is providing a description of the ‘917 patent, which is unrelated to the ‘598 patent. (*Id.*) Thus, this passage has no relevance to the meaning of “printhead” in the ‘598 patent.

Even if this description was somehow relevant to the ‘598 patent, the description is of “a typical cross-sectional view of a printhead,” which cannot be said to serve as a clear definition of “printhead.” Use of the word “typical” shows that the above description is a generalization not intended to cover every printhead. *See, e.g., Certain Printing & Imaging Devices & Components Thereof*, Inv. No. 337-TA-690, Initial Determination at 23 (Sept. 23, 2010) (finding that a passage describing the characteristics of a “typical file” did not serve to define the term “file”).

I find that Staff’s proposed construction – “the element of a printer that applies the mark or image to the print media” – finds support in the intrinsic evidence. The specification describes the printhead as the part of the inkjet printer cartridge that contains nozzles through

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which ink drops are ejected. (See JX-1 at 1:23-36.) Staff's construction is an accurate description and does not import limitations from the specification or the extrinsic evidence.

C. The '053 Patent, The '347 Patent, The '817 Patent, & The '279 Patent

For the remaining asserted patents, the parties have not identified any claim construction issues that are relevant and material to the resolution of this investigation. *Vivid Techs., Inc.*, 200 F.3d at 803 (“[O]nly those [claim] terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”)

IV. INVALIDITY

A. Applicable Law

It is the respondent's burden to prove invalidity, and the burden of proof never shifts to the patentee to prove validity. *Scanner Techs. Corp. v. ICOS Vision Sys. Corp. N.V.*, 528 F.3d 1365, 1380 (Fed. Cir. 2008). “Under the patent statutes, a patent enjoys a presumption of validity, *see* 35 U.S.C. § 282, which can be overcome only through facts supported by clear and convincing evidence[.]” *SRAM Corp. v. AD-II Eng'g, Inc.*, 465 F.3d 1351, 1357 (Fed. Cir. 2006). The Supreme Court recently affirmed the Federal Circuit's long-standing holding that proof of patent invalidity requires clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. ____ (2011).

The clear and convincing evidence standard placed on the party asserting the invalidity defense requires a level of proof beyond the preponderance of the evidence. Although not susceptible to precise definition, “clear and convincing” evidence has been described as evidence which produces in the mind of the trier of fact “an abiding conviction that the truth of a factual contention is ‘highly probable.’” *Price v. Symsek*, 988 F.2d 1187, 1191 (Fed. Cir. 1993) (citing *Buildex, Inc. v. Kason Indus., Inc.*, 849 F.2d 1461, 1463 (Fed.Cir.1988).)

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1. Obviousness

Section 103 of the Patent Act states:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35 U.S.C. § 103(a) (2008).

“Obviousness is a question of law based on underlying questions of fact.” *Scanner Techs. Corp. v. ICOS Vision Sys. Corp. N.V.*, 528 F.3d 1365, 1379 (Fed. Cir. 2008). The underlying factual determinations include: “(1) the scope and content of the prior art, (2) the level of ordinary skill in the art, (3) the differences between the claimed invention and the prior art, and (4) objective indicia of non-obviousness.” *Id.* (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)). These factual determinations are often referred to as the “*Graham* factors.”

The critical inquiry in determining the differences between the claimed invention and the prior art is whether there is a reason to combine the prior art references. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417-418 (2007). In *KSR*, the Supreme Court rejected the Federal Circuit’s rigid application of the teaching-suggestion-motivation test. The Court stated that “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.* at 418. The Court described a more flexible analysis:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue...As our precedents make clear, however, the analysis need not seek out

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precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.

Id.

Since *KSR* was decided, the Federal Circuit has announced that, where a patent challenger contends that a patent is invalid for obviousness based on a combination of prior art references, “the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, . . . and would have had a reasonable expectation of success in doing so.”

PharmaStem Therapeutics, Inc. v. Viacell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007).

In addition to demonstrating that a reason exists to combine prior art references, the challenger must demonstrate that the combination of prior art references discloses all of the limitations of the claims. *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, 1373-1374 (Fed. Cir. 2010) (upholding finding of non-obviousness based on the fact that there was substantial evidence that the asserted combination of references failed to disclose a claim limitation); *Velandar v. Garner*, 348 F.3d 1359, 1363 (Fed. Cir. 2003) (explaining that a requirement for a finding of obviousness is that “all the elements of an invention are found in a combination of prior art references”).

The Supreme Court has stated that “new evidence supporting an invalidity defense may ‘carry more weight’ in an infringement action than evidence previously considered by the PTO.” *Microsoft Corp. v. i4i Ltd. P’ship*, 564 U.S. ____ (2011). (quoting *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360 (Fed. Cir. 1984)). The Court explained that “the challenger’s burden to persuade the jury of its invalidity defense by clear and convincing evidence may be easier to sustain” when relying on prior art not previously considered by the

PTO. *Id.*

2. Written Description & Enablement

The first paragraph of 35 U.S.C. § 112 states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The first paragraph of § 112 contains three separate requirements: enablement, written description,⁸ and best mode. *Univ. of Rochester v. G.D. Searle & Co.*, 358 F.3d 916, 921 (Fed. Cir. 2004) (describing the “[t]hree separate requirements” of § 112, ¶ 1); *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985) (stating that § 112, ¶ 1 “requires that the inventor adequately disclose three separate items”).

Regarding written description, the Federal Circuit has interpreted 35 U.S.C. § 112, ¶ 1, to require the patent specification to “describe the claimed invention so that one skilled in the art can recognize what is claimed.” *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 968 (Fed.Cir.2002). In evaluating whether a patentee has fulfilled this requirement, the standard is that the patent’s “disclosure must allow one skilled in the art to visualize or recognize the identity of the subject matter purportedly described.” *Id.*; *see also Cordis Corp. v. Medtronic Ave, Inc.*, 339 F.3d 1352, 1364 (Fed. Cir. 2003).

Terms need not be used *in haec verba*. *Eiselstein v. Frank*, 52 F.3d 1035, 1038 (Fed.Cir.1995). The written description requirement can be satisfied by “words, structures, figures, diagrams, formulas, etc.” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed.Cir.1997).

⁸ The Federal Circuit reaffirmed in an *en banc* decision that § 112, ¶ 1 contains a written description requirement separate from the enablement requirement. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1340 (Fed. Cir. 2010) (*en banc*).

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Regarding enablement, the Federal Circuit has found that the requirement is satisfied when the inventor provides sufficient information about the claimed invention so that one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation. *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1243-1244 (Fed. Cir. 2003); *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008). The factors included in determining whether or not needed experimentation is “undue” include: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). The inability of the patentee to practice the claim as of the effective filing date of the patent is evidence of non-enablement. *AK Steel*, 344 F.3d at 1244. Enablement is determined from the viewpoint of persons of ordinary skill in the field of the invention at the time the patent application was filed. *Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co.*, 228 F.3d 1338, 1345 (Fed. Cir. 2000).

B. The ‘598 Patent

APM’s Position: APM contends that, if the preamble of the asserted claims of the ‘598 patent is merely a statement of intended use and does not limit the claim, then the claims of the ‘598 patent are invalid on the grounds that they fail to comply with the enablement and written description requirements.

APM reasons that if the preamble does not limit the asserted claims, then claim 1 reads on an integrated circuit with no printhead that is capable of dispensing ink. In addition, APM says, the ‘598 patent specification lacks any teaching that would enable a person skilled in the art to use the claimed integrated circuit without ink. APM says, in other words, the integrated circuit

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structure claimed by the '598 patent does not support the function attributed to "an ink drop generating device" as proposed in HP's claim construction.

APM argues that, to meet the written description requirement, the patent specification "must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." (Citing *Gentry Gallery, Inc. v. Berkline Corp.* 134 F.3d 1473 (Fed. Cir. 1998).)

APM contends that an applicant complies with the written description requirement "by describing the invention, with all its claimed limitations." (Citing *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997).)

APM adds that if the preamble language, "[a] printhead for an inkjet printer," is not a claim limitation, claim 1 of the '598 patent also does not meet the written description requirement because the patent disclosure does not support the claims to demonstrate that the inventor possessed the invention at the time of the patent application was filed. APM says in particular the '598 patent did not include a clear and concise written description that explains how the claimed integrated circuit can dispense ink onto print media without a printhead structure.

APM raises an obviousness issue, saying that Mr. Torgerson, the inventor, agreed that the concept of connecting spaced-apart terminals of a multi-point ground to an external low resistance ground to reduce parasitic resistance and the idea of resistor networks were well known to those skilled in the art of electrical engineering in 1999. APM argues that by "Mr. Torgerson's own admission, the '598 patent claims 1-5 are obvious and cannot be the subject of exclusive rights." APM avers that Mr. Torgerson agreed that the limitations of claims 1 to 5 in the '598 patent were generally known electrical engineering principles when the '598 patent was filed in August 1999. (Citing Tr. at 128:16-131:13.) APM contends that "[T]he results of

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ordinary innovation are not the subject of exclusive rights under the patent laws.” (Citing *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1740-41 (2007).)

APM recites the elements of claims 1 through 5 of the '598 patent and asserts that most of them were generally known to electrical engineers at the time of the invention. APM avers that Mr. Torgerson testified at trial that “he was simply applying well known electrical engineering principles to printheads in the '598.” APM asserts that the technology disclosed in the '598 patent would have been obvious to persons having ordinary skill in the art at the time the '598 patent was filed in August 1999. (Citing 35 U.S.C. § 103.) APM quotes extensively from Mr. Torgerson's testimony and inserts notes at which APM contends “Mr. Torgerson confirmed that the various limitations were known to electrical engineers in August 1999.” (Citing Tr. at 128:16-131:13.)

APM adds that, if “printhead” is merely a statement of intended use, the integrated circuit described by the claim body does not pass muster under the obviousness inquiry. APM argues that Mr. Torgerson confirmed that it would have been obvious to a person having ordinary skill in the art (“PHOSITA”)⁹ of electrical engineering to see the advantage of using a multi-point ground in order to reduce the number of individual ground wires in a circuit. APM asserts that this was commonly done in the engineering art at the time. APM claims a PHOSITA would also have been well aware of resistor networks comprising a plurality of resistors with a common connection that ends in two terminals. APM continues that Mr. Torgerson agreed that one common way to reduce the effects of parasitic resistance in a multipoint ground is to ground both end terminals of the multipoint ground to an external, low-resistance ground. APM

⁹ I do not find any assertion or evidence by APM of the qualifications of a person having ordinary skill in the art in August, 1999.

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concludes that grouping of resistors into primitive groups with primitive select and address lines was also well known in prior art before the filing date of the '598 patent.

HP's Position: HP argues that APM declined to present expert testimony or to move for the admission of any evidence in support of an invalidity case. HP says accordingly, there is no evidence to support an obviousness challenge.

In its reply brief, HP says that APM mistakenly argues that "Mr. Torgerson agreed that the limitations of claims 1 to 5 in the '598 patent were generally known electrical engineering principles." (Citing RIB at 70.) HP counters that Mr. Torgerson's testimony is not as one-sided as APM asserts. HP says, for example, when asked whether multi-point ground was considered to be a basic electrical engineering concept in August 1999, Mr. Torgerson responded, "I don't know that." (Citing Tr. at 128:21.) HP adds when asked whether he applied known electrical engineering concepts to printheads, Mr. Torgerson replied, "I don't fully agree with that." (Citing Tr. at 130:3.)

HP contends that APM has not established that Mr. Torgerson can offer opinion testimony without being designated as an expert, or that Mr. Torgerson's testimony accurately depicts how a PHOSITA would have understood the claims and the art at the time of the invention. HP asserts even if APM elicited certain testimony on the state of the art in 1999, this cannot supplant an element-by-element analysis. HP says that APM "tries to map Mr. Torgerson's general statements onto some of the narrow, specific elements of the '598 patent." (Citing RIB at 71-72.) HP states that, at the evidentiary hearing, counsel for APM did not squarely and expressly ask Mr. Torgerson about each claim element. HP says without this limitation-by-limitation analysis, APM has not proven by clear and convincing evidence that the

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'598 patent is invalid. (Citing *EMI Group N. Am., Inc. v. Cypress Semiconductor Corp.*, 104 F. Supp. 2d 370, 386 (D. Del. 2000), *aff'd in part, rev'd in part*, 268 F.3d 1342 (Fed. Cir. 2001).)

HP argues as an initial matter, APM's written description invalidity theory was not disclosed in APM's pre-trial brief and should be deemed waived. (Citing RPHB at 55.) HP contends that if considered on its merits, this argument fails because "those of skill would readily understand, as Dr. Pond testified, that even without the word 'printhead,' Claims 1-5 of the '598 are limited to the integrated circuitry used in a thermal inkjet printhead, which is exactly what is described in detail throughout the specification." (Citing *Crown Packaging Tech., Inc. v. Ball Metal Beverage Container Corp.*, 2011 WL 1204351 at *4 (Fed. Cir. Apr. 1, 2011).)

In its reply brief, HP states that APM argues if it is determined that "printhead" is not a claim limitation, there is inadequate written description support because the specification does not explain "how the claimed integrated circuit can dispense ink onto print media without a printhead structure." HP submits that APM has waived this argument, because its pre-trial brief articulated a written description challenge based only on a lack of support for the term "coupled." (Citing RPHB at 54.)

HP adds that claims 1 through 5 of the '598 patent do not purport to encompass the dispensing of ink. No written description problem exists, then, because the specification does not need to describe the dispensing of ink.

HP argues that APM's pre-trial brief does not develop an enablement argument. Nor is there any expert testimony from Dr. Clark to support such a position. HP asserts there is a total lack of proof on the issue of enablement.

HP says that APM has effectively admitted that claim 1 of the '598 patent is enabled. HP asserts that in its pre-trial brief, APM states (without any evidentiary support) that "[w]ith

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knowledge of the art of inkjet print head design prior to the filing date of the '598 patent, [a PHOSITA] could easily and without undue experimentation have arrived at the system shown in the '598 patent.” HP concludes that nothing more is required for enablement.

HP contends finally that Dr. Pond testified no matter how claim 1 is construed those of skill in the art would readily understand how to make and use the invention without undue experimentation. (Citing CX-801C at Q. 35-37.) HP concludes that the enablement requirement is satisfied.

In its reply brief, HP argues regarding enablement that “APM believes that if ‘printhead’ is not a limitation of claim 1, then the claimed subject matter is an integrated circuit without a printhead structure that must nevertheless dispense ink, and that the specification does not enable one to ‘use the claimed integrated circuit without ink.’” HP asserts that, as with its written description challenge, APM waived this enablement argument, because it was not included in its pre-trial brief. (Citing RPHB at 55.) HP claims that the cited argument shows that APM previously argued that the “printhead structure,” as opposed to the “integrated circuit structure” now argued, does not support the function attributed to a printhead.

HP says it is unclear why APM thinks that, even if printhead is not a claim limitation, the claimed subject matter must dispense ink. HP avers that there is no testimony to which APM can point for support of this argument, and mere attorney argument cannot rise to the level of clear and convincing evidence.

Staff’s Position: Staff argues that APM did not present an invalidity case at trial and, in particular, its expert, Dr. Lloyd Clark, did not provide any testimony regarding invalidity. Staff contends that any invalidity arguments by APM should be rejected given that the technology described in the patents at issue is sufficiently complex, and there is no expert testimony

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supporting invalidity. (Citing *Proveris Scientific Corp. v. Innovasystems, Inc.*, 536 F.3d 1256, 1267 (Fed. Cir. 2008).) Staff offers that the complexity is demonstrated by the fact that one of ordinary skill in the art would have a bachelor's degree in electrical engineering or physics and five or more years work experience in inkjet technology and integrated circuits. (Citing CX-801C at Q. 92; Tr. at 345-346.)

In its reply brief, Staff says that APM argues that if the preamble of claim 1 of the '598 patent is not a claim limitation, then the asserted claims fail to meet the enablement and written description requirements of 35 U.S.C. § 112. Staff says that APM alleges that "the '598 patent specification lacks any teaching that would enable a person skilled in the art to use the claimed integrated circuit without ink. In other words, the integrated circuit structure claimed by the '598 patent does not support the function attributed to 'an ink drop generating device' as proposed by HP's claim construction." Staff argues that APM's arguments should be rejected because the preamble is a claim limitation. Staff adds, even if the preamble is not a limitation, APM's argument is pure conjecture, unsupported by expert testimony, or any other evidence. Staff asserts that conclusory expert opinion cannot create triable issues of fact with respect to enablement, and adds that "APM lacks even this." (Citing *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 1001 (Fed. Cir. 2008).) Staff continues that there is nothing to support the notion that one of ordinary skill in the art could not reduce the claims to practice without undue experimentation outside of the inkjet/printhead context based upon the specification's description within the inkjet/printhead context.¹⁰

Regarding the written description requirement, Staff contends that "it does not stand to reason that the inventors did not have possession of the full scope of the claims (even assuming

¹⁰ Staff says is unclear why the claims would require "the function attributed to 'an ink drop generating device' (HP's construction of a printhead) as APM argues if the preamble is assumed not to be a limitation."

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the preamble is not a limitation).” Staff asserts that it is completely reasonable to assume that, because the inventors possessed the invention within the inkjet/printhead context, they possessed it generally as well. Staff argues that without well-supported expert testimony, APM cannot carry its burden on this issue. (Citing *Cytologix Corp. v. Ventana Med. Sys.*, 424 F.3d 1168, 1176 (Fed. Cir. 2005).)

Staff argues that, even assuming the preamble is not a limitation, the testimony of the inventor, Joseph Torgerson, was far too equivocal to constitute clear and convincing evidence that the asserted claims are obvious. Staff says, when asked if it was “known to electrical engineers that a way to reduce parasitic resistance is to connect both end terminals of the multi-point ground to an external low resistance ground,” Mr. Torgerson replied, “I would guess maybe, I don’t know for sure.” (Citing Tr. at 129.) Staff adds, when asked if multi-point grounding was a basic electrical engineering concept, Mr. Torgerson replied, “I don’t know that.” (Citing Tr. at 128.) Staff counters that this is not the type of evidence needed to meet the clear and convincing standard.

Discussion and Conclusions: Based on the evidence in the record, I find that APM has failed to meet its burden to produce clear and convincing evidence that any claim of the ‘598 patent is invalid.¹¹

First, I note that APM’s entire invalidity argument is directed against the asserted claims of the ‘598 patent, and it is offered contingent upon a finding that the preambles of the respective asserted claims of the ‘598 patent are not limitations. Inasmuch as, I have found in Section III.B.1 *supra*, that the preambles at issue are limitations on the claims, APM’s invalidity argument is rendered moot.

¹¹ The Notice of Investigation identifies the asserted claims as claims 1-10 of the ‘598 patent. APM makes no mention of claim 7 in its invalidity analysis. Therefore, this finding includes a finding that APM has failed to prove that claim 7 of the ‘598 patent is invalid.

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Nevertheless, assuming *arguendo* that the preambles of the asserted claims were found not to be limitations on their respective claims, I will review each of APM's arguments on that basis.

Written Description

First, I find that HP is incorrect when it asserts that the written description argument was not raised by APM in its prehearing brief. APM argues that the asserted claims of the '598 patent are invalid for failure to meet the written description requirement. (RPHB at 54-55.) I note, however, that the written description requirement is not included in the Joint Stipulation of Contested Issues.¹² Ground Rule 8.3 clearly states that the issues to be tried are limited to those included in the Joint Stipulation of Contested Issues, and this specific requirement was discussed and emphasized at the initial prehearing conference held on July 19, 2010. I find, therefore, that this issue was waived by APM and was outside the scope of the hearing.

Assuming *arguendo* that one were to find that this issue was not waived, I find that APM has failed to meet its burden to produce clear and convincing evidence that the asserted claims of the '598 patent are invalid for failure to meet the written description requirement of the first paragraph of 35 U.S.C. § 112. *Intirtool, Ltd. v. Texar Corp.*, 369 F.3d 1289, 1294 (Fed. Cir. 2004).

APM cites no evidence to support its argument that the '598 patent fails to meet the written description requirement, because it "reads on an integrated circuit with no printhead that is capable of dispensing ink," and "lacks any teaching that would enable a person skilled in the art to use the claimed integrated circuit without ink."

¹² The only invalidity issues raised in the Joint Stipulation of Contested Issues are based on 35 U.S.C. §§ 102 and 103. (Jt. Stip. items 5 and 6.)

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Dr. Pond, HP's expert in the area of thermal inkjet printing devices and the semiconductor manufacturing procedures involved in making those devices, testified credibly that a person having ordinary skill in the art of inkjet printhead design and fabrication would have at least a B.S. degree in electrical engineering or physics and at least five years of experience in the field of inkjet technology and integrated circuits. (CX-801C at Q. 270; Tr. at 252:16-253:13, 345:12-20.) This testimony is un rebutted, and I find that Dr. Pond's testimony accurately describes the qualifications for a person of ordinary skill in the art related to the '598 patent.

Dr. Pond testified credibly and in-depth regarding the '598 patent and its teachings, including the general subject matter, the problems in the industry that the invention addresses, and the details of specifically how the invention solves those problems. He made specific reference to the language of the description and to Figure 6 of the '598 patent. (CX-801C at Q. 75-81.) Dr. Pond demonstrated that the patent would provide a PHOSITA with the ability "to visualize or recognize the identity of the subject matter purportedly described." *Enzo Biochem*, 323 F.3d at 968.

I note, too, that the '598 patent clearly states in numerous places that the invention is for shared multiple ground returns to an inkjet printhead. The title of the '598 patent reveals this, and the Abstract follows suit in more detail. The Background of the Invention describes the problems related to thermal inkjet technology. (JX-1 at 1:1-2:64.) The Summary of the Invention, the drawings contained in the '598 patent and the Detailed Description of a Preferred Embodiment treat the invention in detail. It makes clear that the invention is applicable to variously, "a printhead," an "inkjet printing apparatus," and a "variety of printing systems." (JX-

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1 at 4:1-2, 4:27-36.) The '598 patent describes the apparatus and its functions in great detail, including the integrated circuit that is central to the invention. (JX-1 at 8:1-10:26; Fig. 6.)

Based upon all of the foregoing, I find that APM has failed to meet its burden to produce clear and convincing evidence that the '598 patent is rendered invalid for failure to meet the written description requirement.

Enablement

HP argues correctly that APM's pre-trial brief does not develop the enablement argument. APM has also failed to provide any evidence to support its argument on this point. Staff is also correct when it argues that APM did not present an invalidity case at trial and, in particular, its expert, Dr. Lloyd Clark, did not provide any testimony regarding invalidity. I concur with Staff's assessment that APM's argument is based upon conjecture and is unsupported by expert testimony, or any other evidence. In *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 1001 (Fed. Cir. 2008), the Federal Circuit upheld a summary judgment finding that the patent did not meet the enablement requirement. The court noted that conclusory expert opinion offered by the patentee did not create "triable issues of fact" with respect to enablement. Here APM fails to offer even conclusory opinion to support its position. APM has certainly failed to meet the standard of "clear and convincing" evidence.

While APM specifically concedes the issue of enablement if the preamble of asserted claim 1 is found to be a limitation, its entire argument is based upon the assertion that the term "printhead" does not adequately reveal the structure needed to enable a PHOSITA to practice the invention without undue experimentation. APM offers no evidence to support its contention, relying instead on argument and its own interpretation of the intrinsic evidence. APM offered no expert opinion on this issue. APM relies only on one reference to the testimony of Mr.

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Torgerson on cross-examination (related to APM's argument for obviousness) in which, according to APM, Mr. Torgerson testified that "printhead" is the limitation that distinguishes the invention from the prior art.¹³

APM has failed to meet its burden to produce clear and convincing evidence that the asserted claims are invalid for failure to meet the enablement requirement of the first paragraph of 35 U.S.C. § 112. *Alza Corp. v. Andrx Pharm., LLC*, 603 F.3d 935, 940 (Fed. Cir. 2010).

Obviousness

APM asserts that claims 1-5 of the '598 patent are obvious. APM's obviousness argument lacks two vital ingredients. First, it is devoid of any reference to prior art. Second, it does not allege that each and every element of asserted claims 1-5 was known in the prior art or would otherwise be obvious to a PHOSITA.

The evidentiary basis for APM's contention here is the testimony on cross-examination of one of the co-inventors of the '598 patent, Mr. Torgerson. APM recites the various elements upon which Mr. Torgerson testified and asserts that his testimony admits that the elements about which he testified were obvious and generally known in the industry at the time of the invention. APM does not cite any prior art to support this argument.

The testimony of Mr. Torgerson to which APM makes reference is equivocal at best. For example, during the cross-examination regarding asserted claim 1, reproduced in APM's brief, Mr. Torgerson responded on one occasion that he didn't know for sure when asked if it was known to electrical engineers at the time of the invention that "a way to reduce parasitic resistance is to connect both end terminals of the multi-point ground to an external low resistance ground?" When asked if it would be fair to say that in the patents at issue in this investigation,

¹³ On review of the cited testimony of Mr. Torgerson in APM's brief, I can locate nothing that supports this assertion by APM.

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Mr. Torgerson “applied known electrical engineering concepts to printheads,” he responded, “I don’t fully agree with that.” (Tr. at 129:8-14, 129:23-130:3.)

APM’s argument purports to list each element of asserted claim 1 and makes reference to the “evidence” upon which APM bases its allegation that a particular element is revealed. APM does not cite any “evidence” for two of the elements of claim 1.¹⁴ Inasmuch as, one must prove that the prior art reveals each and every element of the claim(s) in order to render them obvious, APM has failed to demonstrate by clear and convincing evidence that asserted claim 1 is rendered obvious. Because asserted claims 2 through 5 all depend from claim 1,¹⁵ I find that APM has failed to meet its burden to prove by clear and convincing evidence that those dependent claims are obvious.

C. The ‘053 Patent

In Order No. 31, I issued an initial determination finding that the ‘053 patent is not invalid. The Commission declined to review that determination. Therefore, this issue has already been resolved in HP’s favor.

D. The ‘347 Patent

In Order No. 31, I issued an initial determination finding that the ‘347 patent is not invalid. The Commission declined to review that determination. Therefore, this issue has already been resolved in HP’s favor.

¹⁴ The argument omits mention of evidence tied to the second element, requiring “a plurality of heater resistors disposed on said substrate and electrically arranged into a first group and a second group” and the fifth element, teaching “a third electrical conductor disposed on said substrate, coupled to each heater resistor in both said first group and said second group, and terminating in third and fourth terminals disposed spaced apart from each other on said substrate whereby electrical current is returned to complete an electrical circuit.”

¹⁵ Claim 3 depends from claim 2, which in turn depends from claim 1; and claim 4 depends from claim 3 and, therefore, ultimately from claim 1.

E. The '817 Patent

In Order No. 31, I issued an initial determination finding that the '817 patent is not invalid. The Commission declined to review that determination. Therefore, this issue has already been resolved in HP's favor.

F. The '279 Patent

In Order No. 31, I issued an initial determination finding that the '279 patent is not invalid. The Commission declined to review that determination. Therefore, this issue has already been resolved in HP's favor.

V. INFRINGEMENT

A. Applicable Law

A complainant must prove either literal infringement or infringement under the doctrine of equivalents. Infringement must be proven by a preponderance of the evidence. *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988). A preponderance of the evidence standard "requires proving that infringement was more likely than not to have occurred." *Warner-Lambert Co. v. Teva Pharm. USA, Inc.*, 418 F.3d 1326, 1341 n. 15 (Fed. Cir. 2005).

Literal infringement is a question of fact. *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008). Literal infringement requires the patentee to prove that the accused device contains each and every limitation of the asserted claim(s). *Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Int'l, Inc.*, 389 F.3d 1370, 1378 (Fed. Cir. 2004).

As for the doctrine of equivalents:

Infringement under the doctrine of equivalents may be found when the accused device contains an "insubstantial" change from the claimed invention. Whether equivalency exists may be determined based on the "insubstantial differences" test or based on the "triple identity" test, namely, whether the element of the

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accused device “performs substantially the same function in substantially the same way to obtain the same result.” The essential inquiry is whether “the accused product or process contain elements identical or equivalent to each claimed element of the patented invention[.]”

TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc., 529 F.3d 1364, 1376-77 (Fed. Cir. 2008)

(citations omitted).

Thus, if an element is missing or not satisfied, infringement cannot be found under the doctrine of equivalents as a matter of law. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538-39 (Fed. Cir. 1991). Determining infringement under the doctrine of equivalents “requires an intensely factual inquiry.” *Veicular Techs. Corp. v. Titan Wheel Int’l, Inc.*, 212 F.3d 1377, 1381 (Fed. Cir. 2000).

B. The ‘598 Patent

1. Direct Infringement

HP’s Position: HP contends that the following printer cartridges directly infringe claims 1-6 and 8-10 of the ‘598 patent: the Mipo 57 cartridge; the PTC 57 cartridge, and the MicroJet 57 cartridge.

HP asserts that although these respondents may have other various model numbers in the marketplace, the three products analyzed by Dr. Pond are representative of the entire set of accused printer-cartridge products from these respondents. HP explains that the HP products that the respondents copy are members of the HP 56/57 Family of products. (Citing CX-800C at 4-5, 7.) HP claims that all members of the HP 56/57 Family have the same basic printhead integrated circuitry and top-layer structure, and thus are materially identical for purposes of infringement. (Citing CX-800C at 6-7.) Therefore, HP states that although Dr. Pond examined only the HP 57 product and three corresponding clones, his opinions apply to the entire family of HP 56/57 products and correspondingly, to all clones of the entire 56/57 Family. (Citing CX-778C at ¶¶

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10-11; Tr. at 342:8-22; CX-801C at 382.)

HP asserts that there is undisputed and substantial evidence in this investigation that establishes that the accused printer-cartridge products infringe each of the asserted '598 patent claims. (Citing CX-801C at 93-119.) HP states that PTC failed to file a pre-trial brief, so any non-infringement arguments that it had were waived. HP states that APM, too, has waived any argument that the accused printer cartridges do not infringe. (Citing RPHB at 16-31.) HP claims that at trial, the only participating respondent (APM) failed to challenge HP's substantial evidence that the accused printer-cartridge products infringe claims 1-6 and 8-10 of the '598 patent. (Citing Tr. at 674:11-675:3.)

With respect to the accused APM wafer products, HP states that the only direct infringement issues in this case turn on whether the term "printhead" in claims 1-5 of the '598 patent is construed to limit the body of the claim. HP claims that if "printhead" does not limit these claims, then APM's wafers directly infringe because the undisputed evidence of record establishes that each and every limitation in the body of these claims is met by the accused APM wafer products. (Citing CX-801C at 316, 362-363; Tr. at 354:6-20; RPHB at 20-22.) HP states that if "printhead" does limit these claims, then these products do not directly infringe because the parties agree that the term printhead requires the additional structure of at least an ink storage reservoir and an orifice plate. (Citing CX-801C at 316; Tr. at 261:10-262:22; RPHB at 20.)

In its reply brief, HP asserts that neither APM nor the Staff dispute that the accused printer cartridges directly infringe. (Citing CIB at 21-22.) HP reiterates that if "printhead" is not a limitation of claim 1, then the unrebutted evidence of record leads to the conclusion that the APM wafers also directly infringe. (Citing CIB at 22.)¹⁶

¹⁶ HP had previously raised a joint infringement argument, which it has now withdrawn. (CIB at 22.)

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APM's Position: APM contends that its wafers do not directly infringe any claims of the '598 patent.

APM states that by itself, the circuitry on APM's wafer cannot generate ink because it does not have a printhead. APM argues that its wafer products simply do not meet each and every element of the asserted claims because APM's wafer cannot dispense ink. APM asserts that Dr. Pond confirmed that APM does not make a printhead. (Citing Tr. at 261:10-262:2.) APM states that under any construction of "printhead" offered by the parties, there is no direct infringement. (Citing Tr at. 270:9-271:9.)

Staff's Position: Staff contends that HP has failed to demonstrate that the APM wafer products directly infringe the '598 patent. Staff notes that Dr. Pond testified that the integrated circuits on the APM wafers are not printheads and therefore do not directly infringe the '598 patent if the preamble is a limitation. (Citing Tr. at 262, 270-271; CX-801C at Q. 612-614.) Staff states that the evidence shows that APM's integrated circuits must be processed further by MicroJet before they can be used to apply ink to a media. (Citing Tr. at 261-262, 559; CX-801C at Q. 480, 579-581.)

Staff contends that the printer cartridges analyzed by Dr. Pond – the MJ-57 from MicroJet, the MPC57A from Mipo, and the 6657 from PTC – directly infringe claims 1-6 and 8-10 of the '598 patent. (Citing CX-801C at Q. 273-303.) Staff states that APM does not appear to dispute that the accused printer cartridges infringe these claims.

Discussion and Conclusions: Based on the evidence in the record, I find that HP has proven by a preponderance of the evidence that the MJ-57 product from MicroJet and the HC 21, HC 22, HC 22XL, and PTC-6657 products from PTC directly infringe claims 1-6 and 8-10 of the

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'598 patent.¹⁷ I further find that HP has failed to demonstrate that the APM wafer products directly infringe claims 1-5 of the '598 patent.

Before addressing the evidence at issue, I must resolve a dispute concerning the scope of products alleged to infringe the asserted patents. While HP claims that the accused products consist of all of the cartridges that are clones of the HP 56/57 Family of products, it only offers an infringement analysis for a limited set of products. Specifically, Dr. Pond, HP's expert, analyzed a MicroJet cartridge, a Mipo cartridge, and a PTC cartridge. (*See* CX-801C at Q. 130.) Still, HP claims that there is evidence to support a finding that these three cartridges are representative of any cartridge that is designed to work on HP printers that require a cartridge that belongs to the HP 56/57 Family of products.

Staff disputes HP's characterization of the accused products. According to Staff, it would be improper to classify the accused products as any unauthorized copy of the HP 56/57 Family of products. Staff states that "defining the accused products in this vague and open-ended fashion without reference to a model number is unprecedented." (SRB at 2.)

I concur that it would be impermissible to make an open-ended infringement finding with regard to any of the respondents' products that are unauthorized copies, or "clones," of the HP 56/57 Family of products. Such a finding would be unduly vague.

Still, that does not mean that any infringement finding will only be limited to the products actually tested by Dr. Pond. HP identifies a number of accused products by model number. The PTC products identified by model number are: HC 21, HC 22, HC 22XL, and PTC-6657. (CX-800C at Q. 45, 48; CX-801C at Q. 130.) The MicroJet product identified by model number is the MJ-57. (CX-801C at Q. 130.) HP offers undisputed evidence that the products analyzed by Dr.

¹⁷ The Notice of Investigation identifies the asserted claims as claims 1-10 of the '598 patent. HP makes no mention of claim 7 in its infringement analysis. Thus, I find that HP has failed to prove infringement of claim 7 of the '598 patent.

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Pond are representative products with respect to the asserted patents. (CX-801C at Q. 142; CX-800C at Q. 23; CX-778C at ¶¶ 6-11.) Thus, any finding of infringement with respect to PTC will apply for the HC 21, HC 22, HC 22XL, and PTC-6657 products, and any finding of infringement with respect to MicroJet will apply for the MJ-57 product.

First I address the printer cartridges from MicroJet and PTC. HP offers undisputed expert testimony that the MJ-57 cartridge from MicroJet and the PTC-6657 cartridge from PTC directly infringe claims 1-6 and 8-10 of the '598 patent. (CX-801C at Q. 274-303.) Neither APM nor Staff offers any evidence or argument to contradict HP's evidence.

HP also argues that the APM wafer products directly infringe claim 1-5 of the '598 patent. Claim 1 includes the preamble "[a] printhead for an inkjet printer," and claims 2-5 are dependent on claim 1. I have construed "printhead" to be a claim limitation with the definition "the element of a printer that applies the mark or image to the print media."

I find that HP has failed to prove that APM directly infringes claims 1-5 of the '598 patent. Dr. Pond, HP's expert witness, readily admitted at trial that the APM wafers are not "printheads." (Tr. at 261:10-262:22.) Dr. Pond clearly stated that APM's wafer products do not contain a "printhead," and that the APM products do not directly infringe if "printhead" is considered a claim limitation:

Q. And your opinion about that direct infringement is based on the assumption that the printhead in the preamble is not a claim limitation, correct?

A. Yes.

Q. Now, if this Court were to make a determination that the printhead in the preamble is a limitation of the claim, how would that change your opinion?

A. It would be my opinion that APM does not directly infringe.

Q. Okay. Because APM doesn't make a printhead?

A. Because APM does not make a printhead.

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Q. Okay. So if this Court were to find that printhead in claims 1 through 5 of the '598 patent is a claim limitation, in that case, in your opinion, APM would not directly infringe any asserted claim in this investigation, correct?

A. That's correct.

(Tr. at 270:14-271:9.)

Based on the conclusion that “printhead” is a claim limitation, and based on Dr. Pond’s admissions at trial that the APM products lack a “printhead,” I find that HP has failed to demonstrate that APM directly infringes claims 1-5 of the ‘598 patent.

Assuming, *arguendo*, that “printhead” in the preamble is not a claim limitation, I would find that HP has proven direct infringement of claims 1-5 of the ‘598 patent by APM. HP offers credible evidence in the form of expert testimony from Dr. Pond that the APM integrated circuits meet each limitation of claims 1-5 of the ‘598 patent. (CX-801C at Q. 472-516, 612-614.) Besides arguing the lack of a “printhead,” APM offered no non-infringement argument in response to HP’s direct infringement allegations for the ‘598 patent. (RIB at 50-61.)

2. Indirect Infringement

a. Inducement

HP’s Position: HP contends that APM and MicroJet are liable for inducing infringement of the ‘598 patent.

HP argues that APM is liable for inducing infringement for a number of reasons. (Citing CX-801C at 364, 359-63.) HP asserts that APM has admitted to knowing about the HP patents since March 2010. (Citing CX-243C at APM811424; Tr. at 496:3-9.) HP claims that despite this knowledge, APM has continued to sell the accused wafer products to MicroJet. (Citing RX-69C.) HP argues that because the APM wafer products are the single most important component of the accused printer cartridges, these sales to MicroJet constitute strong evidence of APM’s intent to induce infringement. (Citing CX-801C at 364-65.)

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HP claims that APM would like to suggest that it does not know what its customers do with APM wafers. (Citing Tr. at 465:9-20, 559:3-8.) According to HP, testimony under cross-examination and documentary evidence compel the conclusion that APM knows or should have known that its wafers for MicroJet are used in thermal inkjet cartridges. (Citing Tr. at 568:18-22; CX-812C at APM044728-29; CX-82C at APM051217; CX-103C at APM037453.)

HP states that other discrepancies in APM's story indicate that its witnesses are not credible when they try to disclaim knowledge of what happens with their products. For instance, HP says that Mr. Hsieh at first said he did not know what "dots per inch" measured. (Citing Tr. at 476:19-477:2.) HP notes that he later testified that he knew "dots per inch" refers to printing capabilities. (Citing Tr. at 484:7-18.)

In addition, HP claims that APM surely knew about the asserted patents long ago, given that (1) MicroJet studies, and in fact copies, HP's thermal inkjet patents and (2) evidence of record establishes that MicroJet shares its patent knowledge with APM. HP states that MicroJet has actively studied HP patents since at least 2004, which was before APM started making the accused wafers in February 2005. (Citing Tr. at 414:11-12, 416:20-421:16, 564:17-21.) HP says that England Chang of MicroJet – the R&D director who supervised the study and copying of HP's patents – had sent APM a list of Canon inkjet patents to be aware of. (Citing Tr. at 416:20-421:16; CX-94C.) HP argues that this demonstrates that APM itself has an established business practice of studying patents of those companies that have patents that APM may infringe. (*Id.*)

According to HP, APM is a highly technical and sophisticated company that is aware of patents that it may infringe, including the patents of HP. HP believes that APM knows or should have known that the MicroJet end-products are HP-compatible. (Citing CX-801C at 360.)

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HP also argues that MicroJet is liable for induced infringement under 35 U.S.C. 271(b), because at least the Mipo Respondents and PTC import the infringing printer cartridges manufactured by MicroJet. Thus, HP claims that these downstream entities directly infringe the patents by importing into or selling within the United States the accused printer cartridges. HP states that MicroJet must have known that its manufacture of the accused printer cartridges would induce infringement and not merely the acts underlying infringement, because Mr. Peña, a former MicroJet employee, testified that MicroJet studied every HP patent in order to copy them. (Citing Tr. at 416:20-421:16.)

In its reply brief, HP argues that APM is incorrect to state that it only learned of the asserted patents through this investigation. HP claims that the emails {

} (Citing CX-242C; CX-243.) HP believes that APM has an established business practice of studying patents of those companies that have patents that APM may infringe. (Citing CIB at 26.) HP says that it can be inferred that APM knew far in advance of the filing of the Complaint in the instant investigation that it makes wafers for clone printer cartridges that infringe HP's patents. HP argues that APM's version of the facts must be rejected because their witnesses are not credible, a point asserted by both HP and Staff. (Citing SIB at 21 n. 2; CIB at 25-26.)

HP notes that APM relies on MicroJet's post-institution assurance that the accused printer cartridges do not come into the U.S. (Citing RIB at 42.) HP states that there is no evidence that APM relied on such assurances from anything but the most recent phase of its relationship with MicroJet. For example, HP states that APM asked MicroJet to refrain from selling into the U.S. in August 2010. (Citing Tr. at 518:25-519:3.) HP says that while Mr. Pena testified that

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MicroJet withdrew from the U.S. market, APM failed to offer any evidence it knew of any such representations from MicroJet until very recently.

APM's Position: APM contends that it does not induce infringement of the '598 patent.

APM states that the only allegation of inducement by HP is that because APM became aware of HP's patents because of this investigation, APM has induced MicroJet from the beginning of this investigation. APM asserts that both MicroJet and Mr. Pena have confirmed that MicroJet pulled its products and operation from the United States in the year 2000.

APM states that Mr. Pena also confirmed that MicroJet designs the wafers and creates the masks that are used by the foundries to make the wafers. APM states that it is {

} Thus, APM argues that it {

} In fact, as is industry practice, APM claims that it is

{

.} (Citing Tr. at 273:19-276:24.)

APM believes that HP and HP's expert applied an incorrect standard in alleging induced infringement by APM. APM states that because {

} APM asserts that because

MicroJet has assured APM that the accused products are not imported into the United States, HP has failed to show induced infringement by APM. APM argues that HP has not provided any evidence of any specific intent by APM to induce infringement by MicroJet.

APM notes that Mr. Hsieh and Mr. Su testified that {

} (Citing Tr. at 465:9-20, 559:23-560:9.) APM states that Mr. Hsieh testified

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that it is APM's understanding that MicroJet has specifically stated to the ITC in a letter, as well as other occasions, that it has not and does not sell in the U.S. (Citing Tr. at 517:21-518:15.)

APM says that Mr. Hsieh testified that APM has asked MicroJet to refrain from selling into the U.S. (Citing Tr. at 518:16-519:3.)

In its reply brief, APM argues that the mere act of APM selling wafers to MicroJet cannot constitute inducement. APM reiterates that {

} (Citing Tr. at 261-262, 585-587; CX-801C at Q.

480, 579-581.) APM argues that its sale of wafers is not an act of "aiding or abetting" necessary for a finding of inducement.

APM argues that HP has failed to demonstrate the specific intent required for inducement. APM notes that HP and Staff rely on APM's knowledge of MicroJet's manufacture of inkjet cartridges to show specific intent. APM argues that HP and Staff fail to identify any culpable conduct on APM's part. APM asserts that the decisions in *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317 (Fed. Cir. 2009) and *Mikkelsen Graphic Engineering Inc. v. Zund America, Inc.*, 2011 WL 1330782 (E.D. Wis. Apr. 7, 2011) support APM's argument that there has been no inducement.

APM argues that its September 10, 2010 letter to MicroJet pointing out APM's zero-tolerance policy on patent infringement is evidence that APM lacks specific intent to induce infringement. (Citing RX-31C.) APM notes that it also informed its other clients about its zero-tolerance policy regarding importing potentially disputed inkjet-related products into the U.S. (Citing Tr. at 519:4-521:6; RX-32C.) According to APM, such assurance letters from APM to its other customers further support a finding that APM lacked the specific intent required for inducement.

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APM argues that the evidence that HP relies on to prove inducement is flawed. APM points to the March 2010 emails between APM employees that HP relies upon to prove knowledge of the asserted patents. (Citing CIB at 24-25.) APM claims {

} APM asserts that {

.}

APM argues that the fact that it allegedly knew that MicroJet was using the APM ICs in printer cartridge products does not equate to a specific intent to induce infringement. APM asserts that MicroJet sells cartridges in many countries besides the U.S., where sales of HP-compatible cartridges may be perfectly legal. (Citing Tr. at 431-432.) Also, APM claims that the sale of HP-compatible print cartridges does not necessarily equate to infringement, as many compatible products specifically design around patents.

APM notes that HP relies on a list of Canon inkjet patents that MicroJet shared with APM to argue that MicroJet and APM are involved in the practice of copying patented inventions. (Citing CX-94C; CIB at 26.) APM asserts that the list is not a list of U.S. patents or even HP patents, but instead a list of Canon patents granted in Taiwan from 2006 through 2008. APM argues that the list is in no way relevant to the issue of inducement.

Staff's Position: Staff contends that APM has induced infringement of claims 1-6 and 8-10 of the '598 patent.

Staff claims that the evidence shows that APM knew of the asserted patents since at least March 2010. (Citing CX-242C; CX-243C.) Staff claims that the evidence shows that APM induced an act of direct infringement by MicroJet, given that the accused printer cartridges infringe the asserted claims. Staff believes that APM knew or should have known that its action

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would induce such direct infringement given that APM knew that it was making integrated circuits for MicroJet to be used in clones of HP printer cartridges. (Citing CX-798C at Q. 19-20; CX-801C at Q. 600-611; Tr. at 539, 559-560, 568, 614; CX-65C; CX-94C; CX-96C; CX-98; CX-242C; CX-725C; CX-812.) Staff argues that the testimony from APM witnesses that they were not sure whether or not MicroJet uses APM's integrated circuits in the manufacture of thermal inkjet printer cartridges is not credible. (Citing Tr. at 465-466, 559.)

In its reply brief, Staff notes that APM argues that it cannot be liable for inducement because { } Staff asserts that such an argument is incorrect, because inducement only requires that the alleged inducer actively aid and abet the direct infringer. Staff believes that APM's manufacture of the integrated circuits for MicroJet is a sufficient active step that aids and abets MicroJet's infringement.

Staff reiterates its belief that APM knew it was making integrated circuits for MicroJet to be used in clones of HP printer cartridges. Staff states that the evidence actually shows that APM knew the precise MicroJet cartridges models (HC-E01 and HC-E02) for which the APM wafers at issue (AP95101 and AP95201) were to be used. (Citing CX-812 at APM44729.)

Discussion and Conclusions: Based on the evidence in the record, I find that HP has demonstrated by a preponderance of the evidence that MicroJet induces infringement of claim 1-6 and 8-10 of the '598 patent. I further find that HP failed to demonstrate that APM induced infringement of claims 1-6 and 8-10 of the '598 patent.

Section 271(b) of the Patent Act prohibits inducement: "[w]hoever actively induces infringement of a patent shall be liable as an infringer." 35 U.S.C. § 271(b) (2008). The Supreme Court explained that "[t]he addition of the adverb 'actively' suggests that the

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inducement must involve the taking of affirmative steps to bring about the desired result.”

Global-Tech Appliances, Inc. v. SEB S.A., --- S.Ct. ----, 2011 WL 2119109 at *4 (May 31, 2011).

As the Federal Circuit stated:

To establish liability under section 271(b), a patent holder must prove that once the defendants knew of the patent, they “actively and knowingly aid[ed] and abett[ed] another’s direct infringement.” However, “knowledge of the acts alleged to constitute infringement” is not enough. The “mere knowledge of possible infringement by others does not amount to inducement; specific intent and action to induce infringement must be proven.”

DSU Med. Corp. v. JMS Co., 471 F.3d 1293, 1305 (Fed. Cir. 2006) (en banc in relevant part)

(citations omitted). The court reiterated its position on this point when it stated:

In *DSU Med. Corp. v. JMS Co.*, this court clarified en banc that the specific intent necessary to induce infringement “requires more than just intent to cause the acts that produce direct infringement. Beyond that threshold knowledge, the inducer must have an affirmative intent to cause direct infringement.”

Kyocera Wireless Corp. v. Int’l Trade Comm’n, 545 F.3d 1340, 1354 (Fed. Cir. 2008) (citation

omitted); *see also Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1328 (Fed. Cir. 2009)

(stating that the patentee must prove that the inducer had a “specific intent to encourage

another’s infringement of the patent.”). The Supreme Court recently held that “induced

infringement under §271(b) requires knowledge that the induced acts constitute patent

infringement.” *Global-Tech Appliances, Inc. v. SEB S.A.*, --- S.Ct. ----, 2011 WL 2119109 at *7

(May 31, 2011).

The required specific intent may be proven through circumstantial evidence. *Broadcom*

Corp. v. Qualcomm Inc., 543 F.3d 683, 699 (Fed. Cir. 2008). A district court has stated that

“[p]roof of inducing infringement requires the establishment of a high level of specific intent.”

Lucent Techs. Inc. v. Gateway, Inc., 2007 WL 925510, at *2 (S.D. Cal. Mar. 21, 2007). In

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addition, “direct infringement is a prerequisite to inducing infringement.” *Fina Research, S.A. v. Baroid Ltd.*, 141 F.3d 1479, 1484 (Fed. Cir. 1998).

HP argues that MicroJet induces infringement by manufacturing print cartridges that are sold to companies such as Mipo and PTC. HP asserts that “MicroJet engaged in a sale for importation to downstream distributors of infringing printer cartridges.” (CIB at 23.) HP offers undisputed evidence that the printer cartridges sold by PTC are “MicroJet-sourced” cartridges. (CX-801C at Q. 142; CX-800C at Q. 98.) Because I have concluded in Section V.B.1, *supra* that the accused inkjet cartridges from PTC infringe claims 1-6 and 8-10 of the ‘598 patent, the prerequisite direct infringement exists.

HP argues that MicroJet intended to induce infringement. HP offers undisputed evidence that MicroJet studied all of HP’s thermal inkjet printer patents to copy the inventions disclosed therein. (Tr. at 416:20-421:16.) Mr. Pena, a former MicroJet employee, testified that MicroJet has a dedicated operation led by its director of research and development to review and copy the technology disclosed in, *inter alia*, HP’s patents. (*Id.*) Based on this undisputed evidence, I find that MicroJet, by its actions, demonstrated the specific intent to induce infringement.

Based on the foregoing, I find that HP has demonstrated by a preponderance of the evidence that MicroJet induces infringement of claims 1-6 and 8-10 of the ‘598 patent.

HP also argues that APM induces infringement. Specifically, HP argues that APM induces MicroJet’s infringement by providing MicroJet with the integrated circuits that are used in MicroJet’s print cartridges. Because I have concluded in Section V.B.1, *supra* that MicroJet’s MJ-57 print cartridge infringes claims 1-6 and 8-10 of the ‘598 patent, the prerequisite direct infringement exists.

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I find that HP has failed to offer sufficient evidence of the specific intent needed to prove inducement. HP attempts to prove that APM knew of the asserted HP patents prior to this investigation. HP relies on an email string between Gibson Pu and Chung Chieh Hsieh, both APM employees. (CX-243C.) In the email {

} (*Id.*) The {

} (*Id.*) {

} (*Id.*) HP has not shown that this vague reference demonstrates APM's knowledge of the asserted patents. While these emails show {

}.¹⁸ (*Id.*; *see also* Tr. at 496:3-9.)¹⁹

HP also claims that APM knew of the asserted patents through its interactions with MicroJet. According to HP, MicroJet studies and copies HP's thermal inkjet patents, and shares its patent knowledge with APM. HP cites to the testimony of Mr. Pena, who testified that while he was employed at MicroJet, he observed MicroJet employees studying HP's thermal inkjet patent portfolio and copying the inventions found in the patents. (Tr. at 416:20-421:16.) Mr. Pena testified that this review of HP patents was led by England Chang, MicroJet's director of research and development. (*Id.* at 419:11-420:12.)

HP offers no evidence that MicroJet shared its knowledge of the HP patents with APM. HP cites to an {

¹⁸ This finding is in no way inconsistent with my conclusion in Section II.A *supra*, that the emails exchanged between Mr. Pu and Mr. Hsieh demonstrate that APM knew or should have known that MicroJet printer cartridges incorporating ICs made by APM were imported into the United States.

¹⁹ The original email in the email string includes a link to a yahoo.com website. (CX-243C.) There has been no allegation by any party that the website in the email includes an identification of any of the asserted patents in this investigation.

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.} (CX-94C.) HP claims that this email shows that “MicroJet very likely studied the patents in suit, and shared them with APM.” (CIB at 26.) I find that the email at issue is insufficient to support the conclusion that MicroJet shared its knowledge of the asserted patents with APM. The existence of an email { } is not enough to conclude that MicroJet habitually disclosed relevant inkjet patents to APM, and specifically disclosed the asserted HP patents to APM.

In sum, HP has failed to provide sufficient evidence to demonstrate that APM had knowledge of the asserted patents prior to the filing of this investigation.²⁰ “Without knowledge of a patent, it is impossible to intend to induce infringement of it.” *Tech. Patents LLC v. Deutsche Telekom AG*, 2010 WL 3895338, at *4 (D. Md. Sept. 29, 2010); *see also Ardco, Inc. v. Page, Ricker, Felson Mktg., Inc.*, 1992 WL 246862, at *4 (N.D. Ill. Sept. 23, 1992).²¹

Even assuming that HP demonstrated that APM had knowledge of the asserted patents prior to this investigation, proof of mere knowledge of the patents is not enough to prove inducement. *DSU*, 471 F.3d at 1305. Inducement requires “specific intent to encourage another’s infringement of the patent.” *Vita-Mix*, 581 F.3d at 1328. HP has shown (1) that APM employees discussed amongst themselves HP’s patent infringement lawsuit against MicroJet, and how that would affect APM’s business; and (2) that MicroJet shared its knowledge of patents other than the asserted HP patents with APM. HP has not explained how this evidence

²⁰ HP does not argue that APM’s requisite intent was formed after the institution of this investigation. (CIB at 24-26.) Even though APM clearly knew about the asserted patents once the investigation began, HP offers no argument or evidence that APM formed the necessary intent to induce infringement only after institution of the investigation.

²¹ HP also argues that APM knew that its integrated circuits were being used by MicroJet to manufacture HP-compatible inkjet cartridges. I have concluded in Section II.A, *supra*, that APM knew or should have known that MicroJet printer cartridges incorporating ICs made by APM were imported into the United States. Still, this does not support a further conclusion that APM intended to encourage MicroJet to infringe the asserted patents, as HP has not actually demonstrated that APM was aware of the asserted patents prior to this investigation.

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demonstrates a specific intent on the part of APM to encourage MicroJet's infringement of the patents-in-suit. HP's evidence is insufficient to meet the high level of proof needed to show specific intent required for inducement.

b. Contributory Infringement

HP's Position: HP contends that APM is liable for contributory infringement of the '598 patent. (Citing CX-801C at 365-366.)

HP states that the printer cartridges directly infringe the patent. HP claims that the printhead ICs on APM's wafer products are a material part of the patented inventions. HP asserts that there is no question that the printhead devices on the APM wafers are specially adapted for infringement. (Citing CX-801C at 364-366.) HP believes that the integrated circuitry on these wafers is the most critical aspect of the asserted claims, and the HP marketplace products that they protect. (*Id.*)

HP states that it is clear that APM knows that its printhead devices are specially adapted for infringement. (*Id.*) HP asserts that APM was fully aware of the HP patents as early as March of 2010, and very likely much earlier than that for the reasons discussed above. (Citing CX-243C.) HP argues that APM has continued to sell its wafers to MicroJet despite APM's full knowledge of HP's asserted patents. (Citing RX-69C.)

HP asserts that the APM wafer products have no substantial non-infringing use. According to HP, there is no evidence that any purported non-infringing use is substantial. (Citing Tr. at 352:23-354:5.)

In its reply, HP notes that APM argues that there is no contributory infringement because there are substantial non-infringing uses for the wafer products when they are incorporated into cartridges used to dispense atypical fluids, such as biological materials. According to HP, this

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argument assumes that the use of “ink” is a claim limitation and that such atypical fluids are not “ink.” (Citing JX-15; Tr. at 305:4-10.) HP argues that even if “ink” is a claim limitation and even if atypical fluids are not “ink,” there is no record evidence that such applications are substantial uses, as required by the norms of 35 U.S.C. § 271(c). (Citing Tr. at 352:23-354:5.)

HP says that APM attempts to argue that because HP has obtained patents for atypical inks, there must be substantial uses for these applications. (Citing RIB at 45-46, 50.) HP asserts that this argument is not convincing, because the grant of a patent is not an indication that the invention is practiced in a commercially substantial way; patents merely grant the negative right to exclude others from practicing the invention.

HP claims that APM “quibbles” that Dr. Pond did not investigate non-infringing uses beyond his personal knowledge. (Citing RIB at 42-43.) HP asserts that APM has not shown that Dr. Pond’s personal knowledge was insufficient to aid with expert testimony on this issue.

APM’s Position: APM contends that HP failed to prove contributory infringement for the ‘598 patent.

APM states that Dr. Pond conceded that he did not investigate the issue of non-infringing uses beyond his personal knowledge. (Citing Tr. at 304:1-6.) APM claims that for this reason alone, APM is not liable for contributory infringement. APM notes that Dr. Pond conceded at trial that a product having a complex and specific design, such as a microprocessor, can have many different uses. (Citing Tr. at 300:21-302:16.) APM asserts that Dr. Pond knew of at least one commercial use for the accused inkjet cartridges that involved dispensing a liquid other than ink. (Citing Tr. at 257:2-258:3.) APM states that Mr. Torgerson conceded that the accused inkjet cartridges can be used for dispensing biological fluids and human cells, and that HP has obtained patent protection for these uses of inkjet cartridges. (Citing Tr. at 147:2-148:4.)

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APM notes that HP may argue that “ink” can be defined expansively to cover fluids besides typical printing ink. APM offers the dictionary definition of “ink,” and says that such definition should control. APM argues that there is nothing in the asserted patents that would suggest a deviation from the ordinary definition of “ink.” APM identifies all of the references in the ‘598 patent showing that the patent is clearly directed towards dispensing “ink” in the context of printing applications.

In its reply brief, APM submits that the purpose of 35 USCS § 271(c) is to provide for protection of patent rights where enforcement against direct infringers is impracticable. APM argues that in this investigation, enforcement against direct infringers is practicable, as multiple alleged direct infringers are named as respondents.

APM argues that HP has failed to prove the knowledge element of contributory infringement. APM claims that the evidence overwhelmingly indicates that APM did not know that the combination for which the supplied components were made was both patented and infringing. (Citing Tr. at 220:17-221:11, 431:18-25, 432:11-24, 509:8-17, 463:17-22, 521:16-522:2, 559:23-560:9, 461:17-462:21, 513:7-514:1, 465:9-20, 508:19-509:7; CX-2 at page 12.) APM submits that this is shown through the testimony Mr. Su and Mr. Hsieh, who were credible witnesses that gave truthful answers under oath. (Citing Tr. at 486:5-21.)

APM asserts that the evidence shows that it was not aware of the patents-in-suit prior to this investigation. (Citing Tr. at 578:4-20, 508:19-509:3.) APM states that HP tries to prove APM’s knowledge of the asserted patents through the email messages between APM employees { (Citing CX-242C; CX-243C.) APM argues that these emails {

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} (Citing Tr. at 492:10-17, 494:9-14.) APM also claims that the translation found in CX-242C is inaccurate, a point raised by APM during the testimony of Mr. Hsieh. (Citing Tr. at 494:18-495:12, 504:1-4, 504:11-12.)

APM reiterates its argument that there are substantial non-infringing uses for the inkjet cartridges. APM notes that based purely on his personal knowledge, Dr. Pond conceded that he knew of at least one commercial use for the accused inkjet cartridges that involved dispensing a liquid other than ink. (Citing Tr. 257:2-258:3.)

APM states that Trudy Benjamin testified that “a lot of (HP’s) patents (cover) things other than ink.” (Citing Tr. at 147:6-8.) APM says that Ms. Benjamin testified that she has been involved in “a lot of discussions ... (about HP’s) inkjet patents and inkjet applications covering things other than ink.” (Citing Tr. at 147:10-13.) APM says that Ms. Benjamin specifically pointed out, that in addition to ink, HP’s printer cartridges are used to dispense “biological-type fluids.” (Citing Tr. at 147:20-148:1.) APM argues that Ms. Benjamin’s testimony supports a conclusion that there are substantial non-infringing uses.

APM states that HP argues that the APM wafer products have no substantial non-infringing uses. APM argues that HP’s emphasis on the wafer completely misses the point because the focus in contributory infringement is on the products actually sold and not on the an ingredient or component of those products.

APM claims that HP relies upon the conclusory, uncorroborated and suspect testimony of its expert, Dr. Pond, to the effect that the use of “specialty inks” was virtually non-existent, but he cited no documentation or other evidence to support this self-serving conclusion. (Citing Tr. at 353:16-354:5.) APM believes that Dr. Pond further undermined his own credibility by adopting an implausibly broad definition for “ink.” (Citing Tr. at 353:3-12.) APM notes that Dr. Pond

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conceded that he did not investigate the issue of non-infringing uses of the accused products beyond his personal knowledge. (Citing Tr. at 304:1-6.)

Staff's Position: Staff contends that APM contributorily infringes claims 1-6 and 8-10 of the '598 patent.

Staff states that there is evidence that the accused printer cartridges directly infringe claims 1-6 and 8-10. Staff states that the APM integrated circuits are specifically designed for use in the clones of the HP 56/57 Family of printer cartridges, and are a material component of the cartridges. (Citing CX-801C at Q. 620-628.) Staff asserts that the integrated circuits have no substantial non-infringing uses. (*Id.*) Staff claims that there is no evidence that the APM integrated circuits are actually used for non-infringing applications.

In its reply brief, Staff reiterates that there are no substantial non-infringing uses. Staff states that APM relies on the fact that Canon uses thermal inkjet cartridges for an application in television sets. (Citing RIB at 44-45.) Staff states that the evidence shows that the Canon cartridges require a "special printhead" and an "extensive maintenance system" and would not be like "anything you would see in your office." (Citing Tr. at 346-347.) Thus, Staff does not believe that traditional inkjet cartridges could be used in a similar application.

Staff next addresses APM's criticism of the fact that Dr. Pond did not do any research into substantial non-infringing uses beyond his personal knowledge. Staff notes that Dr. Pond first became involved with thermal inkjet printers in 1984 and has consulted in the field since 1998. (Citing CX-801C at Q. 11, 13.) Staff asserts that the fact that the Canon application is the only non-printer thermal inkjet application which Dr. Pond could remember indicates that these unusual applications are not "substantial." (Citing Tr. at 346.) Staff claims that Dr. Pond's

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testimony that 99.9% or virtually 100% of thermal inkjet cartridges are used in traditional printer devices is a sufficient *prima facie* showing of no substantial non-infringing uses.

Staff states that APM also relies on the fact that HP owns some patents in the thermal inkjet field for dispensing biological-type fluids. (Citing RIB at 45.) Staff argues that this is irrelevant because there is no evidence that there are commercial embodiments of these special-use patents or that such patents could be practiced by traditional printhead cartridges.

Discussion and Conclusions: Based on the evidence in the record, I find that HP has demonstrated by a preponderance of the evidence that APM contributively infringes claims 1-6 and 8-10 of the '598 patent.

Section 271(c) of the Patent Act governs contributory infringement, and states:

Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination, or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

35 U.S.C. § 271(c).

When determining contributory infringement in the context of a Section 337 investigation, the Federal Circuit has explained:

[T]o prevail on contributory infringement in a Section 337 case, the complainant must show *inter alia*: (1) there is an act of direct infringement in violation of Section 337; (2) the accused device has no substantial non-infringing uses; and (3) the accused infringer imported, sold for importation, or sold after importation within the United States, the accused components that contributed to another's direct infringement.

Spanston, Inc. v. Int'l Trade Comm'n, 629 F.3d 1331, 1353 (Fed. Cir. 2010).

In addition to the foregoing factors, the Federal Circuit has explained that the patentee must also demonstrate that the alleged infringer "knew that the combination for which its

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components were especially made was both patented and infringing.” *Golden Blount, Inc. v. Robert H. Peterson Co.*, 365 F.3d 1054, 1061 (Fed. Cir. 2004) (quoting *Preemption Devices, Inc. v. Minn. Mining & Mfg., Co.*, 803 F.2d 1170, 1174 (Fed. Cir. 1986)). As the Supreme Court stated, “§271(c) requires knowledge of the existence of the patent that is infringed.” *Global-Tech Appliances, Inc. v. SEB S.A.*, --- S.Ct. ----, 2011 WL 2119109 at *7 (May 31, 2011).

I find that there is an act of direct infringement in violation of Section 337, as I have concluded in Section V.B.1, *supra* that MicroJet’s MJ-57 print cartridge infringes claims 1-6 and 8-10 of the ‘598 patent. I find that the APM integrated circuits sold to MicroJet are a material part of the invention based on Dr. Pond’s opinion that “the specific design of the printhead device circuit is the focus of each of the asserted claims and the numerous benefits of the patented technology arise precisely because of the printhead device design.” (CX-801C at Q. 623-624.)

The next issue to consider is whether or not the components at issue – the APM integrated circuits sold to MicroJet – have any substantial non-infringing uses. *Golden Blount*, 365 F.3d at 1061 (explaining that the patentee must show that the alleged contributory infringer’s “components have no substantial noninfringing uses.”) HP asserts that there are no substantial non-infringing uses for the APM chips. HP relies on the opinion of Dr. Pond to support its argument. Dr. Pond testified that “the circuit design on the APM wafers is complex, as is required by the very nature of the device. This complexity and specificity in design makes clear that these products are not staple articles of commerce and are not suitable for any non-infringing uses.” (CX-801C at Q. 628.) At trial, Dr. Pond testified that in the entire universe of thermal inkjet printing devices, “99.9%” or “virtually 100%” of the products are being used to eject traditional inks, i.e. black and color inks. (Tr. at 353:16-354:5.) Dr. Pond also testified that he

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has not seen any evidence in this investigation that any of the accused products were being used to eject anything other than traditional inks. (*Id.* at 352:23-353:2.) Dr. Pond's testimony is un rebutted. Based upon the foregoing, I find that HP has made a *prima facie* showing that there are no substantial non-infringing uses for the APM integrated circuits.

APM argues that HP has failed to show that there are no substantial non-infringing uses. APM claims that Dr. Pond did not investigate the issue of non-infringing uses beyond his personal knowledge. (Tr. at 304:1-6.) APM asserts that this alone is reason to find against HP. APM's argument ignores Dr. Pond's testimony regarding the characteristics and complexity of the APM chips and the use to which thermal inkjet printing devices are put. Dr. Pond has been recognized as an expert in the field of thermal inkjet printing devices and semiconductor manufacturing procedures involved in making those devices. (*Id.* at 253:10-13.) Thus, this opinion, based on Dr. Pond's personal knowledge and his inspection of the APM IC's and MicroJet thermal inkjet cartridges, carries with it Dr. Pond's expertise in the field of thermal inkjet printing that he has acquired through his years of education and experience. I find that Dr. Pond's testimony is credible when he renders an opinion regarding non-infringing uses.

APM next argues that there are substantial non-infringing uses for inkjet cartridges that involve dispensing a liquid other than ink. Specifically, APM relies on Dr. Pond's testimony regarding Canon's use of thermal inkjet cartridges for flat panel TVs and Mr. Torgerson's testimony that inkjet cartridges can be used for dispensing biological fluids and human cells. (Tr. at 257:2-258:3, 147:2-148:4.) APM claims that HP has even obtained patent protection for the use of inkjet cartridges to dispense fluids other than ink. (*Id.* at 147:2-148:4.)

APM's arguments fail to address the issue at hand – whether or not there are substantial non-infringing uses for APM's integrated circuits. APM instead focuses on uses for inkjet

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cartridges for dispensing non-ink fluids. APM offers no evidence that its own integrated circuits are used for any other purpose besides integration into the accused products. *See Golden Blount*, 365 F.3d at 1061 (explaining that the relevant inquiry is whether or not the “**components have no substantial noninfringing uses.**”) (emphasis added); *Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d 1321, 1326 (Fed. Cir. 2010) (“To establish contributory infringement, the patent owner must show...that **the component has no substantial noninfringing uses...**”) (emphasis added). Thus, APM has failed to rebut HP’s *prima facie* showing that the APM products have no substantial non-infringing uses.

Even if the uses for inkjet cartridges asserted by APM were relevant to the analysis, APM offers no evidence that such uses are “substantial.” The Federal Circuit has explained that “non-infringing uses are substantial when they are not unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.” *Vita-Mix*, 581 F.3d at 1327. Dr. Pond testified credibly that he had not seen any evidence in this investigation that any of the accused products were being used to eject anything other than traditional ink. (Tr. at 352:23-353:2.) Dr. Pond testified that, looking at the entire universe of thermal inkjet printing devices, “virtually 100 percent” of devices are being used to eject traditional inks, as opposed to specialty inks. (*Id.* at 353:16-354:5.) Dr. Pond’s testimony in this regard is unrebutted. Therefore, the evidence does not support a finding that the non-traditional uses suggested by APM are “substantial.”

APM argues that the fact that HP obtained patent protection for dispensing non-typical fluids demonstrates that the uses are substantial. As HP correctly notes, the grant of a patent is not an indication that an invention is being commercially exploited. These alleged HP patents therefore do not demonstrate substantiality.

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APM also makes unsupported assertions such as “[t]here is a significant market for using inkjet cartridges for non-printing purposes,” but offers no evidence of that “significant market.” (RIB at 50.) APM’s unsupported assertions are insufficient to demonstrate significant uses. *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1581 (Fed. Cir. 1989) (“Attorneys’ argument is no substitute for evidence.”) I find that APM has failed to rebut Dr. Pond’s credible opinion that uses of inkjet cartridges to dispense non-traditional fluids are insubstantial.

Finally, I find that HP has satisfied the knowledge requirement for contributory infringement. While I have concluded in Section V.B.2.a, *supra* that APM did not have knowledge of the asserted patents prior to the investigation, APM certainly had knowledge of the asserted patents and the infringement at issue once it was served with HP’s Complaint. And APM continued to sell its components to MicroJet even after receiving HP’s Complaint. (RX-69C.) I find that this is sufficient to satisfy the knowledge requirement for contributory infringement. *See Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 488-491 (1964) (holding that the knowledge requirement was satisfied when the alleged infringer received a letter from the patent holder alleging infringement of the patent-in-suit). Courts have found that the requisite knowledge may be based on the service of the complaint alleging patent infringement. *See, e.g., Monolithic Power Sys., Inc. v. O2 Micro Int’l Ltd.*, 476 F. Supp. 2d 1143, 1157-1158 (N.D. Cal. 2007) (explaining that “actual knowledge of a patent accrues on the date when the defendant was served”).

Based on the foregoing, I conclude that HP has demonstrated by a preponderance of the evidence that APM contributorily infringes claims 1-6 and 8-10 of the ‘598 patent.

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C. The '053 Patent

1. Direct Infringement

Based on the evidence in the record, I find that HP has proven by a preponderance of the evidence that the MJ-57 product from MicroJet and the HC 21, HC 22, HC 22XL, and PTC-6657 products from PTC directly infringe claims 1-6 and 8-17 of the '053 patent.

HP offers undisputed expert testimony that the MJ-57 cartridge from MicroJet and the PTC-6657 cartridge from PTC directly infringe claims 1-6 and 8-17 of the '053 patent. (CX-801C at Q. 304-345.) HP offers undisputed evidence that the products analyzed by Dr. Pond are representative products with respect to the asserted patents. (CX-801C at Q. 142; CX-800C at Q. 23; CX-778C at ¶¶ 6-11.) Neither APM nor Staff offers any evidence or argument to contradict HP's evidence.

2. Indirect Infringement

a. Inducement

With regard to MicroJet, the parties have not offered any arguments concerning inducement that are unique to the '053 patent. In Section V.C.1 *supra*, I found that HP demonstrated direct infringement of the '053 patent by MicroJet and PTC. For the reasons discussed in Section V.B.2.a *supra*, I find that HP has proven by a preponderance of the evidence that MicroJet induces infringement of the '053 patent.

With regard to APM, the parties have not offered any arguments concerning inducement that are unique to the '053 patent. For the reasons discussed in Section V.B.2.a *supra*, I find that HP has failed to prove by a preponderance of the evidence that APM induces infringement of the '053 patent because HP failed to prove the necessary intent element.

b. Contributory Infringement

The parties have not offered any arguments concerning contributory infringement that are unique to the '053 patent. In Section V.C.1 *supra*, I found that HP demonstrated direct infringement of the '053 patent by MicroJet and PTC. For the reasons discussed in Section V.B.2.b *supra*, I find that HP has proven by a preponderance of the evidence that APM is liable for contributory infringement of the '053 patent.

D. The '347 Patent

1. Direct Infringement

Based on the evidence in the record, I find that HP has proven by a preponderance of the evidence that the MJ-57 product from MicroJet and the HC 21, HC 22, HC 22XL, and PTC-6657 products from PTC directly infringe claims 1, 3-5, and 8-12 of the '347 patent.

HP offers undisputed expert testimony that the MJ-57 cartridge from MicroJet and the PTC-6657 cartridge from PTC directly infringe claims 1, 3-5, and 8-12 of the '347 patent. (CX-801C at Q. 346-405.) HP offers undisputed evidence that the products analyzed by Dr. Pond are representative products with respect to the asserted patents. (CX-801C at Q. 142; CX-800C at Q. 23; CX-778C at ¶¶ 6-11.) Neither APM nor Staff offers any evidence or argument to contradict HP's evidence.

2. Indirect Infringement

a. Inducement

With regard to MicroJet, the parties have not offered any arguments concerning inducement that are unique to the '347 patent. In Section V.D.1 *supra*, I found that HP demonstrated direct infringement of the '347 patent by MicroJet and PTC. For the reasons

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discussed in Section V.B.2.a *supra*, I find that HP has proven by a preponderance of the evidence that MicroJet induces infringement of the '053 patent.

With regard to APM, the parties have not offered any arguments concerning inducement that are unique to the '347 patent. For the reasons discussed in Section V.B.2.a *supra*, I find that HP has failed to prove by a preponderance of the evidence that APM induces infringement of the '347 patent because HP failed to prove the necessary intent element.

b. Contributory Infringement

The parties have not offered any arguments concerning contributory infringement that are unique to the '347 patent. In Section V.D.1 *supra*, I found that HP demonstrated direct infringement of the '347 patent by MicroJet and PTC. For the reasons discussed in Section V.B.2.b *supra*, I find that HP has proven by a preponderance of the evidence that APM is liable for contributory infringement of the '347 patent.

E. The '817 Patent

1. Direct Infringement

Based on the evidence in the record, I find that HP has proven by a preponderance of the evidence that the MJ-57 product from MicroJet and the HC 21, HC 22, HC 22XL, and PTC-6657 products from PTC directly infringe claims 1-14 of the '817 patent.

HP offers undisputed expert testimony that the MJ-57 cartridge from MicroJet and the PTC-6657 cartridge from PTC directly infringe claims 1-14 of the '817 patent. (CX-801C at Q. 406-445.) HP offers undisputed evidence that the products analyzed by Dr. Pond are representative products with respect to the asserted patents. (CX-801C at Q. 142; CX-800C at Q. 23; CX-778C at ¶¶ 6-11.) Neither APM nor Staff offers any evidence or argument to contradict HP's evidence.

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2. Indirect Infringement

a. Inducement

With regard to MicroJet, the parties have not offered any arguments concerning inducement that are unique to the '817 patent. In Section V.E.1 *supra*, I found that HP demonstrated direct infringement of the '817 patent by MicroJet and PTC. For the reasons discussed in Section V.B.2.a *supra*, I find that HP has proven by a preponderance of the evidence that MicroJet induces infringement of the '817 patent.

With regard to APM, the parties have not offered any arguments concerning inducement that are unique to the '817 patent. For the reasons discussed in Section V.B.2.a *supra*, I find that HP has failed to prove by a preponderance of the evidence that APM induces infringement of the '817 patent because HP failed to prove the necessary intent element.

b. Contributory Infringement

The parties have not offered any arguments concerning contributory infringement that are unique to the '817 patent. In Section V.E.1 *supra*, I found that HP demonstrated direct infringement of the '817 patent by MicroJet and PTC. For the reasons discussed in Section V.B.2.b *supra*, I find that HP has proven by a preponderance of the evidence that APM is liable for contributory infringement of the '817 patent.

F. The '279 Patent

1. Direct Infringement

Based on the evidence in the record, I find that HP has proven by a preponderance of the evidence that the MJ-57 product from MicroJet and the HC 21, HC 22, HC 22XL, and PTC-6657 products from PTC directly infringe claims 9-15 of the '279 patent.

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HP offers undisputed expert testimony that the MJ-57 cartridge from MicroJet and the PTC-6657 cartridge from PTC directly infringe claims 9-15 of the '279 patent. (CX-801C at Q. 446-471.) HP offers undisputed evidence that the products analyzed by Dr. Pond are representative products with respect to the asserted patents. (CX-801C at Q. 142; CX-800C at Q. 23; CX-778C at ¶¶ 6-11.) Neither APM nor Staff offers any evidence or argument to contradict HP's evidence.

2. Indirect Infringement

a. Inducement

With regard to MicroJet, the parties have not offered any arguments concerning inducement that are unique to the '279 patent. In Section V.F.1 *supra*, I found that HP demonstrated direct infringement of the '279 patent by MicroJet and PTC. For the reasons discussed in Section V.B.2.a *supra*, I find that HP has proven by a preponderance of the evidence that MicroJet induces infringement of the '279 patent.

With regard to APM, the parties have not offered any arguments concerning inducement that are unique to the '279 patent. For the reasons discussed in Section V.B.2.a *supra*, I find that HP has failed to prove by a preponderance of the evidence that APM induces infringement of the '279 patent because HP failed to prove the necessary intent element.

b. Contributory Infringement

The parties have not offered any arguments concerning contributory infringement that are unique to the '279 patent. In Section V.F.1 *supra*, I found that HP demonstrated direct infringement of the '279 patent by MicroJet and PTC. For the reasons discussed in Section V.B.2.b *supra*, I find that HP has proven by a preponderance of the evidence that APM is liable for contributory infringement of the '279 patent.

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VI. DOMESTIC INDUSTRY

A. Applicable Law

In patent-based proceedings under section 337, a complainant must establish that an industry “relating to the articles protected by the patent...exists or is in the process of being established” in the United States. 19 U.S.C. § 1337(a)(2) (2008). Under Commission precedent, the domestic industry requirement of Section 337 consists of an “economic prong” and a “technical prong.” *Certain Data Storage Systems and Components Thereof*, Inv. No. 337-TA-471, Initial Determination Granting EMC’s Motion No. 471-8 Relating to the Domestic Industry Requirement’s Economic Prong (unreviewed) at 3 (Public Version, October 25, 2002).

The “economic prong” of the domestic industry requirement is satisfied when it is determined that the economic activities set forth in subsections (A), (B), and/or (C) of subsection 337(a)(3) have taken place or are taking place. *Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, USITC Pub. No. 3003, 1996 ITC LEXIS 556, Comm’n Op. at 21 (Nov. 1996). With respect to the “economic prong,” 19 U.S.C. § 1337(a)(2) and (3) provide, in full:

(2) Subparagraphs (B), (C), (D), and (E) of paragraph (1) apply only if an industry in the United States, relating to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established.

(3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned-

(A) significant investment in plant and equipment;

(B) significant employment of labor or capital; or

(C) substantial investment in its exploitation, including engineering, research and development, or licensing.

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Given that these criteria are listed in the disjunctive, satisfaction of any one of them will be sufficient to meet the domestic industry requirement. *Certain Integrated Circuit Chipsets and Products Containing Same*, Inv. No. 337-TA-428, Order No 10, Initial Determination (Unreviewed) (May 4, 2000), citing *Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, Commission Op. at 15, USITC Pub. 3003 (Nov. 1996).

To meet the technical prong, the complainant must establish that it practices at least one claim of the asserted patent. *Certain Point of Sale Terminals and Components Thereof*, Inv. No. 337-TA-524, Order No. 40 (April 11, 2005). “The test for satisfying the ‘technical prong’ of the industry requirement is essentially same as that for infringement, i.e., a comparison of domestic products to the asserted claims.” *Alloc v. Int’l Trade Comm’n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). The technical prong of the domestic industry can be satisfied either literally or under the doctrine of equivalents. *Certain Excimer Laser Systems for Vision Correction Surgery and Components Thereof and Methods for Performing Such Surgery*, Inv. No. 337-TA-419, Order No. 43 (July 30, 1999).

B. Economic Prong

In Order No. 30, I issued an initial determination granting HP’s motion for summary determination that it satisfies the economic prong of the domestic industry requirement for the asserted patents. The Commission declined to review this determination. Therefore, this issue has already been resolved in HP’s favor.

C. Technical Prong

1. The ‘598 Patent

HP’s Position: HP contends that its 56/57 Family of products practices at least claim 1 of the ‘598 patent.

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HP states that though there are different models in the HP 56/57 family, these versions exist because of difference in ink volume, ink color, and compatibility with certain printing platforms. (Citing CX-800C at 6-7.) HP asserts that all members of the HP 56/57 Family have the same basic printhead integrated circuitry and top-layer structure, and thus are materially identical for purposes of infringement. (*Id.*) HP explains that though Dr. Pond examined only the HP 57 product and three corresponding clones, his opinions apply to the entire family of HP 56/57 products and correspondingly, to all clones of the entire 56/57 Family. (Citing CX-778C at ¶¶ 10-11; Tr. at 342:8-22; CX-801C at 382.)

HP argues that the evidence in this case clearly demonstrates that the HP 56/57 Family of products practice each and every limitation of claim 1 of the '598 patent. (Citing CX-801C at 367-391.) HP claims that APM has waived any counter-argument to HP's technical-prong showing. HP notes that Dr. Clark did not testify on the technical prong in his rebuttal witness statement. (Citing RX-83C.)

APM's Position: APM does not address the technical prong in its post-hearing briefs.

Staff's Position: Staff contends that the evidence shows that the HP 56/57 Family of printer cartridges practices claim 1 of the '598 patent. (Citing CX-801C at Q. 659-667.) Staff states that APM does not appear to dispute this on substantive grounds.

Discussion and Conclusions: Based on the evidence in the record, I find that HP has satisfied the technical prong of the domestic industry requirement for the '598 patent. Dr. Pond offered credible testimony that the HP 57 print cartridge satisfies all of the elements of claim 1 of the '598 patent. (CX-801C at Q. 659-667.) No party disputes Dr. Pond's testimony. Based on the undisputed evidence, I conclude that HP has demonstrated that the HP 57 print cartridge practices claim 1 of the '598 patent.

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2. The '053 Patent

HP's Position: HP contends that its 56/57 Family of products practices at least claim 1 of the '053 patent.

HP states that though there are different models in the HP 56/57 family, these versions exist because of difference in ink volume, ink color, and compatibility with certain printing platforms. (Citing CX-800C at 6-7.) HP asserts that all members of the HP 56/57 Family have the same basic printhead integrated circuitry and top-layer structure, and thus are materially identical for purposes of infringement. (*Id.*) HP explains that though Dr. Pond examined only the HP 57 product and three corresponding clones, his opinions apply to the entire family of HP 56/57 products and correspondingly, to all clones of the entire 56/57 Family. (Citing CX-778C at ¶¶ 10-11; Tr. at 342:8-22; CX-801C at 382.)

HP argues that the evidence in this case clearly demonstrates that the HP 56/57 Family of products practice each and every limitation of claim 1 of the '053 patent. (Citing CX-801C at 392-399.) HP claims that APM has waived any counter-argument to HP's technical-prong showing.

APM's Position: APM does not address the technical prong in its post-hearing briefs.

Staff's Position: Staff contends that the evidence shows that the HP 56/57 Family of printer cartridges practices claim 1 of the '053 patent. (Citing CX-801C at Q. 668-676.) Staff states that APM does not appear to dispute this on substantive grounds.

Discussion and Conclusions: Based on the evidence in the record, I find that HP has satisfied the technical prong of the domestic industry requirement for the '053 patent.

Dr. Pond offered credible testimony that the HP 57 print cartridge satisfies all of the elements of claim 1 of the '053 patent. (CX-801C at Q. 668-676.) No party disputes Dr. Pond's

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testimony. Based on the undisputed evidence, I conclude that HP has demonstrated that the HP 57 print cartridge practices claim 1 of the '053 patent.

3. The '347 Patent

HP's Position: HP contends that its 56/57 Family of products practices at least claim 1 of the '347 patent.

HP states that though there are different models in the HP 56/57 family, these versions exist because of difference in ink volume, ink color, and compatibility with certain printing platforms. (Citing CX-800C at 6-7.) HP asserts that all members of the HP 56/57 Family have the same basic printhead integrated circuitry and top-layer structure, and thus are materially identical for purposes of infringement. (*Id.*) HP explains that though Dr. Pond examined only the HP 57 product and three corresponding clones, his opinions apply to the entire family of HP 56/57 products and correspondingly, to all clones of the entire 56/57 Family. (Citing CX-778C at ¶¶ 10-11; Tr. at 342:8-22; CX-801C at 382.)

HP argues that the evidence in this case clearly demonstrates that the HP 56/57 Family of products practice each and every limitation of claim 1 of the '347 patent. (Citing CX-801C at 400-407.) HP claims that APM has waived any counter-argument to HP's technical-prong showing.

APM's Position: APM does not address the technical prong in its post-hearing briefs.

Staff's Position: Staff contends that the evidence shows that the HP 56/57 Family of printer cartridges practices claim 1 of the '347 patent. (Citing CX-801C at Q. 677-685.) Staff states that APM does not appear to dispute this on substantive grounds.

Discussion and Conclusions: Based on the evidence in the record, I find that HP has satisfied the technical prong of the domestic industry requirement for the '347 patent.

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Dr. Pond offered credible testimony that the HP 57 print cartridge satisfies all of the elements of claim 1 of the '347 patent. (CX-801C at Q. 677-685.) No party disputes Dr. Pond's testimony. Based on the undisputed evidence, I conclude that HP has demonstrated that the HP 57 print cartridge practices claim 1 of the '347 patent.

4. The '817 Patent

HP's Position: HP contends that its 56/57 Family of products practices at least claim 1 of the '817 patent.

HP states that though there are different models in the HP 56/57 family, these versions exist because of difference in ink volume, ink color, and compatibility with certain printing platforms. (Citing CX-800C at 6-7.) HP asserts that all members of the HP 56/57 Family have the same basic printhead integrated circuitry and top-layer structure, and thus are materially identical for purposes of infringement. (*Id.*) HP explains that though Dr. Pond examined only the HP 57 product and three corresponding clones, his opinions apply to the entire family of HP 56/57 products and correspondingly, to all clones of the entire 56/57 Family. (Citing CX-778C at ¶¶ 10-11; Tr. at 342:8-22; CX-801C at 382.)

HP argues that the evidence in this case clearly demonstrates that the HP 56/57 Family of products practice each and every limitation of claim 1 of the '817 patent. (Citing CX-801C at 408-411.) HP claims that APM has waived any counter-argument to HP's technical-prong showing.

APM's Position: APM does not address the technical prong in its post-hearing briefs.

Staff's Position: Staff contends that the evidence shows that the HP 56/57 Family of printer cartridges practices claim 1 of the '347 patent. (Citing CX-801C at Q. 686-690.) Staff states that APM does not appear to dispute this on substantive grounds.

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Discussion and Conclusions: Based on the evidence in the record, I find that HP has satisfied the technical prong of the domestic industry requirement for the '817 patent.

Dr. Pond offered credible testimony that the HP 57 print cartridge satisfies all of the elements of claim 1 of the '817 patent. (CX-801C at Q. 686-690.) No party disputes Dr. Pond's testimony. Based on the undisputed evidence, I conclude that HP has demonstrated that the HP 57 print cartridge practices claim 1 of the '817 patent.

5. The '279 Patent

HP's Position: HP contends that its 56/57 Family of products practices at least claim 9 of the '279 patent.

HP states that though there are different models in the HP 56/57 family, these versions exist because of difference in ink volume, ink color, and compatibility with certain printing platforms. (Citing CX-800C at 6-7.) HP asserts that all members of the HP 56/57 Family have the same basic printhead integrated circuitry and top-layer structure, and thus are materially identical for purposes of infringement. (*Id.*) HP explains that though Dr. Pond examined only the HP 57 product and three corresponding clones, his opinions apply to the entire family of HP 56/57 products and correspondingly, to all clones of the entire 56/57 Family. (Citing CX-778C at ¶¶ 10-11; Tr. at 342:8-22; CX-801C at 382.)

HP argues that the evidence in this case clearly demonstrates that the HP 56/57 Family of products practice each and every limitation of claim 9 of the '279 patent. HP claims that APM has waived any counter-argument to HP's technical-prong showing.

APM's Position: APM does not address the technical prong in its post-hearing briefs.

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Staff's Position: Staff contends that the evidence shows that the HP 56/57 Family of printer cartridges practices claim 1 of the '347 patent. (Citing CX-801C at Q. 691-698.) Staff states that APM does not appear to dispute this on substantive grounds.

Discussion and Conclusions: Based on the evidence in the record, I find that HP has satisfied the technical prong of the domestic industry requirement for the '279 patent.

Dr. Pond offered credible testimony that the HP 57 print cartridge satisfies all of the elements of claim 9 of the '279 patent. (CX-801C at Q. 691-698.) No party disputes Dr. Pond's testimony. Based on the undisputed evidence, I conclude that HP has demonstrated that the HP 57 print cartridge practices claim 9 of the '279 patent.

VII. REMEDY & BONDING

A. Exclusion Order

HP's Position: HP contends that the proper remedy in this investigation is the issuance of a general exclusion order prohibiting the entry of all infringing inkjet ink supplies and components thereof.

HP argues that there has been a widespread pattern of unauthorized use. HP claims that there is evidence that all named respondents imported, sold for importation, and/or sold after importation within the United States infringing articles. HP asserts that the strategies used by MicroJet suggest that there is a widespread pattern of unauthorized importation of articles that are not always readily identifiable by source. HP claims that while its employees are able to connect infringing inkjet cartridges back to MicroJet, MicroJet could try to sidestep a limited exclusion order by {

.} (Citing CX-800C at Q. 98.)

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HP asserts that the infringing activities by the respondents continue even after this investigation commenced. HP claims that APM has continued to sell its wafers to MicroJet. (Citing RX-69C.) HP argues that this shows that HP's patent enforcement efforts do not guarantee that the infringing activity will stop.

HP argues that business conditions exist that enable circumvention of a limited exclusion order. HP notes that there is an established demand for the HP 56/57 Family ink cartridges. (Citing CX-800C at Q. 111, 117.) HP claims that the respondents and other foreign manufacturers stand to reap significant profits from the sale of the accused products. (Citing CX-800C at Q. 109.) HP believes that the profits margins are very high for manufacturers of clones because the companies do not need to invest heavily in research and development, product development, and market development. (Citing CX-800C at Q. 109-110; CX-786.) HP asserts that it is more expensive to remanufacture a used ink cartridge than to produce a clone. (Citing CX-800C at Q. 111.)

HP claims that an extensive network exists in the United States that allows foreign manufacturers to widely distribute cartridges in the United States. (Citing CX-800C at Q. 112-114.) According to HP, there are scores of potential domestic affiliates willing to sell the infringing products from the foreign manufacturers. (Citing CX-800C at Q. 112.) HP offers the example of a company called { } to show the type of network available to a foreign manufacturer that is interested in selling its products in the United States. (Citing CX-800C at Q. 113-114; CX-787.)

HP claims that the internet provides foreign manufacturers and domestic retailers a well-developed, low-cost and flexible means for selling the accused products. (Citing CX-800C at Q. 115.) HP notes that there are many large, well-known open marketplaces such as Amazon.com,

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Ebay.com, and Craigslist where both foreign manufacturers and domestic retailers can sell directly to consumers. (*Id.*)

HP argues that a general exclusion order is warranted because of the difficulty in identifying the source of the products. HP states that the accused products arrive in either a generic box with no company markings, or no box at all. HP claims that the generic boxing, or lack of boxing, makes it virtually impossible to identify the true source of the products. (Citing CX-800C at Q. 116-118.) HP states that foreign manufacturers also establish {
} (Citing CX-800C at Q. 119.)

HP argues that the actions of the defaulting parties – identified by HP as MicroJet and PTC – fully support the entry of a general exclusion order.

HP argues that the entry of a general exclusion order is consistent with the public interest. According to HP, there is no evidence of undue burden on public health and welfare, competitive conditions in the United States, or on U.S. consumers.

HP contends that if a general exclusion order is not recommended, then it is entitled to a limited exclusion order against the following respondents: Asia Pacific Microsystems, Inc. of Hsinchu City, Taiwan; MicroJet Technology Co., Ltd. of Hsinchu City, Taiwan; Mipo Technology Limited of Hong Kong; Mipo Science & Technology Co., Ltd. of Guangzhou, China; and PTC Holdings Limited of Hong Kong.

In its reply brief, HP argues that APM's opposition to the entry of a general exclusion order is inconsistent with its position that it does not import into the United States and does not know what its customers do with APM wafers. HP asserts that APM arguments against a general exclusion order have been waived pursuant to Ground Rule 8.2 because they were not raised in APM's pre-hearing brief.

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HP agrees with Staff that a general exclusion order should issue under paragraph (A) of Section 337(d)(2). HP notes that Staff asserts that a general exclusion order is not available under paragraph (B) because there purportedly exists a small number of manufacturing respondents. HP asserts that it offered evidence of at least 20 other entities that have the ability to produce hundreds of thousands of infringing ink cartridges on a monthly basis. (Citing CX-800C at Q. 103-104.) HP states that the Commission relied on similar testimony in the 691 investigation to find that a general exclusion order was warranted under paragraph (B) of Section 337(d)(2).

HP disagrees with Staff's contention that MicroJet's default cannot be used as support for the issuance of a general exclusion order. HP believes that default findings, along with other evidence, may support the issuance of a general exclusion order. HP claims that the Commission's decision in *Certain Ink Cartridges & Components Thereof*, Inv. No. 337-TA-565 only held that a default finding, on its own, was insufficient to support the issuance of a general exclusion order.

APM's Position: APM contends that HP is not entitled to a general exclusion order. APM believes that HP proved, at most, importation of accused products by only a handful of companies in a volume that could not be called more than "a trickle."

APM argues that the default of MicroJet and the consent orders entered into by the Mipo respondents do not demonstrate widespread unauthorized use. APM claims that the decisions of MicroJet and Mipo reflect their desire not to be involved in an ITC investigation, and are not the basis for restricting importation of products from third parties into the United States.

APM points to the testimony of Mr. Pena, who testified that MicroJet avoided the U.S. market and focused on other parts of the world. (Citing Tr. at 431:1-437:25.) APM states that

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Mr. Pena explained that MicroJet believed that the expenses involved with selling in the U.S. outweighed the benefits of establishing a market presence in the U.S. (*Id.*) APM claims that Mr. Pena testified that MicroJet saw the U.S. market as highly competitive and difficult to penetrate. (*Id.*)

APM argues that there is no evidence to support HP's contention that foreign companies may avoid detection by { } (Citing CPHB at 266.) APM asserts that HP's only proof of this is the unsubstantiated speculation offered by Mr. Barkley. (Citing CX-800C at 30.) APM states that the only tangible piece of evidence relied upon by HP – a 2009 email from someone at { } (Citing CX-489C.)

APM argues that relevant business conditions belie any need for a general exclusion order. APM claims that it Mr. Pena testified that it is unprofitable to sell in the U.S. due to customs and middle-men expenses. APM asserts that Mr. Barkley admitted that barriers to entry to the printhead market were high for the HP 56/57 Family of products.

Finally, APM asserts that an exclusion order should contain a certification provision that permits entities to certify that their imported goods are not violating the Commission's exclusion order.

In its reply brief, APM argues that HP's reasoning for seeking a general exclusion order is contrary with its assertion that all of the unauthorized imports are sourced by MicroJet. (Citing CIB at 76.) APM states that when arguing for a general exclusion order, HP now claims that MicroJet has 20 or so competitors that can produce infringing cartridges. (Citing CIB at 77.) APM argues that HP should not be allowed to have it both ways.

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APM challenges HP assertions of widespread unauthorized importation. APM notes that the Mipo respondents have stated that they imported on 811 units from 2001 to the present. (Citing CX-795C.)

APM argues that HP is wrong to assert that millions of APM integrated circuits arrive in the United States by way of MicroJet. (Citing CIB at 11.) According to APM, HP has been unable to find a single unauthorized APM integrated circuit in the United States.

Staff's Position: Staff supports HP's request for a general exclusion order pursuant to paragraph (A) of Section 337(d)(2).

Staff argues that a general exclusion order is necessary to prevent circumvention of an exclusion order. Staff states that the evidence shows that the accused printer cartridges are purposefully sold without any indication of the manufacturer in order to obfuscate their origin. (Citing CX-800C at Q. 98, 116-118; CX-489.) Staff asserts that the process of { } makes it more difficult to discover infringing products. (Citing CX-800C at Q. 99-100.)

Staff claims that circumvention is facilitated by the fact that the MicroJet-sourced cartridges can be sold into already-existing distribution networks, including many internet sales outlets, with their origin obfuscated by merely attaching different brand labels. (Citing CX-800C at Q. 98, 115-117.) Staff argues that the nature of this industry allows companies to sell infringing products without revealing their true identities and change corporate identities with ease. (Citing CX-800C at Q. 106.)

Staff does not believe that a general exclusion order is warranted under paragraph (B) of Section 337(d)(2). Staff notes that the evidence establishes that the accused products originate from a single manufacturer – MicroJet. Staff asserts that Commission precedent indicated that a

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widespread pattern of unauthorized use does not exist where there are a small number of manufacturing respondents.

Discussion and Conclusions: Based on the evidence in the record, I recommend that the Commission issue a general exclusion order directed to inkjet ink cartridges with printheads and components thereof that infringe any of the asserted patents.

Pursuant to 19 U.S.C. § 1337(d), the Commission may issue either a limited or a general exclusion order. A limited exclusion order instructs the U.S. Customs and Border Protection (“CBP”) to exclude from entry all articles that are covered by the patent at issue and that originate from a named respondent in the investigation. A general exclusion order instructs the CBP to exclude from entry all articles that are covered by the patent at issue, without regard to source.

A general exclusion order is permitted in certain limited situations. Specifically, the statute provides:

(2) The authority of the Commission to order an exclusion from entry of articles shall be limited to persons determined by the Commission to be violating this section unless the Commission determines that—

(A) a general exclusion from entry of articles is necessary to prevent circumvention of an exclusion order limited to products of named persons; or

(B) there is a pattern of violation of this section and it is difficult to identify the source of infringing products.

19 U.S.C. § 1337(d)(2); *see also Certain Hydraulic Excavators*, Inv. No. 337-TA-582, Commission Opinion (Feb. 3, 2009) (describing the standard for general exclusion orders). The Federal Circuit has explained that a complainant must meet “the heightened requirements of

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1337(d)(2)(A) or (B)” before the Commission will issue a general exclusion order. *Kyocera*, 545 F.3d at 1358.²²

Circumvention - 19 U.S.C. § 1337(d)(2)(A)

This prong of the statute requires a showing that “a general exclusion from entry of articles is necessary to prevent circumvention of an exclusion order limited to products of named persons[.]” I find that HP has met the heightened requirement of Section 337(d)(2)(A) to support a finding that a general exclusion order is necessary to prevent circumvention of a limited exclusion order.

Specifically, HP offered testimony from Matthew Barkley, the Manager of Intellectual Property and Brand Protection Programs for the Imaging and Printing Group at HP. (CX-800C at Q. 3.) Mr. Barkley has been working in the printing field at HP since 2001. (*Id.* at Q. 9-11.) Mr. Barkley testified credibly regarding the many ways that infringers in the field of thermal inkjet printing devices circumvent limited exclusion orders.

Mr. Barkley described the fact that foreign manufacturers package their products in unmarked, generic or reseller branded packaging that lacks any markings or labels to identify their origin. (CX-800C at Q. 116-118.) Mr. Barkley stated that based on his investigation of the accused products, MicroJet does not label its products. (*Id.* at Q. 98.)

Mr. Barkley testified that he found evidence that {

} and explained that is a tactic used to avoid detection. (*Id.* at Q. 32, 99.) Mr.

Barkley explained that {

²² This Recommended Determination does not address the so-called “*Spray Pumps* factors,” and instead focuses on the language of the statute. *Certain Ground Fault Circuit Interrupters & Products Containing Same*, Inv. No. 337-TA-615, Comm’n Op. at 25 (Mar. 26, 2009).

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} (*Id.* at Q. 100.)

Mr. Barkley also testified that another approach employed by MicroJet to avoid detection is {

} (CX-800C at Q. 101.) Mr. Barkley stated that MicroJet has employed this strategy with the ink cartridges it sells. (*Id.*)

Mr. Barkley noted that the MicroJet-sourced products are branded under various brand names. (CX-800C at Q. 101.) For example, Mr. Barkley testified that HP has observed MicroJet-sourced products sold under the following brand names – MicroJet, Mipo, PTC, {
} (*Id.*)

Mr. Barkley also testified that many manufacturers and distributors create multiple websites and corporate identities with ease, allowing them to sell infringing products while concealing their true identities. (CX-800C at Q. 106.) Mr. Barkley talked about the role the internet plays in the sale of ink cartridges. Mr. Barkley explained that open marketplaces such as Amazon.com, Ebay.com, and Craigslist provide manufacturers and distributors with a dedicated, flexible infrastructure to sell to consumers. (*Id.* at Q. 115.) Mr. Barkley stated that “[i]t is extremely difficult, if not impossible, to track and identify the source of these types of individual sales.” (*Id.*)

Based on the foregoing, I find that HP has offered evidence to establish that the named respondents would be likely to circumvent a limited exclusion order. Therefore, I recommend that the Commission issue a general exclusion order in this investigation pursuant to 19 U.S.C. § 1337(d)(2)(A).

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APM characterizes much of Mr. Barkley's testimony as "unsubstantiated speculation." (See RIB at 77.) Contrary to APM's characterization, the testimony cited *supra* is all based on Mr. Barkley's firsthand experience investigating the practices of the named respondents in this investigation. Thus, I find no reason to dismiss the testimony as "unsubstantiated speculation."

Pattern of Violation - 19 U.S.C. § 1337(d)(2)(B)

This prong requires a showing that "there is a pattern of violation of this section and it is difficult to identify the source of infringing products." The pattern of violation must be separate from the accused infringement alleged in this investigation. See *Certain Self-Cleaning Litter Boxes & Components Thereof*, Inv. No. 337-TA-625, Commission Opinion at 56 (Apr. 28, 2009) (explaining that a "pattern of violation of this section" must include acts of importation unrelated to one of the named respondents).

I find that HP has failed to demonstrate that it is entitled to a general exclusion order under Section 337(d)(2)(B). The Commission has found that complainants failed to show a "pattern of violation" when the complainants "failed to identify a single act of importation that is unrelated to one of the Respondents." *Certain Self-Cleaning Litter Boxes & Components Thereof*, Inv. No. 337-TA-625, Comm'n Op. at 56 (Apr. 28, 2009). In another investigation, the Commission found that infringement by four respondents did not establish the "pattern of violation" that warranted a general exclusion order. *Certain Ground Fault Circuit Interrupters & Products Containing Same*, Inv. No. 337-TA-615, Comm'n Op. at 26 (Mar. 26, 2009).

Here, HP has proven infringement against three respondents – MicroJet, PTC, and APM. Two other respondents – SinoTime Technologies, Inc. d/b/a All Colors and Mextec d/b/a Mipo America Ltd. – admitted infringement in their settlement agreements with HP. (Order Nos. 17 & 18.) Of the five, MicroJet is the only respondent that manufactures infringing ink cartridges. HP

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identifies at least 20 other companies that allegedly “have the ability to produce hundreds of thousands of infringing ink cartridges on a monthly basis.” (CX-800C at Q. 103-104.) This evidence does not go to the issue of a pattern of violation, as HP does not assert that these 20 companies produce infringing products; HP only claims that the 20 companies are capable of producing infringing products. I find that proven infringement by five respondents, only one of whom actually manufactures the infringing cartridges, does not constitute “a pattern of violation” of Section 337 that warrants a general exclusion order.

This case is factually distinguishable from the 691 investigation, which also involved HP as the complainant. In that investigation, the Commission concluded that HP was entitled to a general exclusion order pursuant to Section 337(d)(2)(B). To support that conclusion, the Commission found that “HP has identified a wide array of entities in addition to respondents that manufacture infringing ink cartridges and sell them on the Internet as being compatible with the HP02 model.” *Certain Inkjet Ink Supplies & Components Thereof*, Inv. No. 337-TA-691, Comm’n Op. at 12 (Jan. 28, 2011). Here, HP offers no such evidence, as it only alleges that there are other companies that *may* be capable of manufacturing infringing products.

Based on the foregoing, I do not recommend a general exclusion order pursuant to 19 U.S.C. § 1337(d)(2)(B).

B. Bonding

HP’s Position: HP contends that the bond should be set at 100% of the entered value of the imported infringing products. HP notes that in cases involving defaulting respondents, the Commission typically sets the bond at 100%. HP argues that reliable pricing information was not available in this investigation because PTC and MicroJet did not participate in discovery.

APM’s Position: APM offers no position regarding bonding.

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Staff's Position: Staff contends that the bond should be set at 100% of the entered value of the imported infringing products. Staff believes that there is not an adequate basis given the existing record to determine an accurate price differential between the domestic and accused cartridges. Staff asserts that this conclusion is consistent with the conclusion reached by the Commission in the 691 investigation, which was another investigation initiated by HP concerning inkjet printer cartridges.

Discussion and Conclusions: I recommend that the bond should be set at 100% of the entered value of the imported infringing products.

The administrative law judge and the Commission must determine the amount of bond to be required of a respondent, pursuant to section 337(j)(3), during the 60-day Presidential review period following the issuance of permanent relief, in the event that the Commission determines to order a remedy. The purpose of the bond is to protect the complainant from any injury. 19 CFR §§ 210.42(a)(1)(ii), 210.50(a)(3). The complainant has the burden of supporting any bond amount it proposes. *Certain Rubber Antidegradants, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-533, Comm'n Op., 2006 ITC LEXIS 591 (Jul. 21, 2006).

When reliable price information is available, the Commission has often set the bond by eliminating the differential between the domestic product and the imported, infringing product. *See Certain Microsphere Adhesives, Processes for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op. at 24 (1995). In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could be ascertained. *See, e.g., Certain Integrated Circuit Telecommunication Chips and Products Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Comm'n Op. at 41 (1995).

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The Commission has set a bond of 100% when the evidence supported a finding that it would be difficult or impossible to calculate a bond based on price differentials. *Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, Comm'n Op., 1996 WL 1056209 (Sept. 23, 1996) (finding that a bond of 100% was appropriate "because of the difficulty in quantifying the cost advantages of respondents' imported Enercon E-40 wind turbines and because of price fluctuations due to exchange rates and market conditions."); *Certain Systems For Detecting and Removing Viruses or Worms, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-510, Comm'n Op., 2007 WL 4473083 (Aug. 2007) (imposing a bond of 100% based on a finding that the parties had numerous models and products lines, and that a price comparison would be difficult because respondent's products were a combination of hardware and software while the complainant's products were software only); *Certain Flash Memory Circuits and Products Containing Same*, Inv. No. 337-TA-382, USITC Pub. No. 3046, Comm'n Op. at 26-27 (July 1997) (a 100% bond imposed when price comparison was not practical because the parties sold products at different levels of commerce, and the proposed royalty rate appeared to be *de minimis* and without adequate support in the record).

It is HP's burden to demonstrate that a bond should be imposed. *Certain Rubber Antidegradants, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-533, Comm'n Op., 2006 ITC LEXIS 591 (Jul. 21, 2006). MicroJet and PTC failed to participate in any way in the hearing process, including discovery, and it is reasonable to conclude that it would be futile for HP to attempt to obtain reliable pricing information from those respondents to calculate the price differential between HP's inkjet cartridges and the infringing inkjet cartridges. There is no evidence that APM was in a position to know the pricing data for the

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accused inkjet cartridges. Therefore, I recommend a bond of 100% of the entered value of the imported infringing inkjet cartridges. *See Certain Oscillating Sprinklers, Sprinkler Components, & Nozzles*, Inv. No. 337-TA-448, Comm'n Order (Mar. 1, 2002) (setting a bond of 100% because the defaulting respondent "did not participate in the investigation, failed to provide discovery responses, and the record is silent as to prices charged by [the respondent].").

VIII. MATTERS NOT DISCUSSED

This Initial Determination's failure to discuss any matter raised by the parties, or any portion of the record, does not indicate that it has not been considered. Rather, any such matter(s) or portion(s) of the record has/have been determined to be irrelevant, immaterial or meritless. Arguments made on brief which were otherwise unsupported by record evidence or legal precedent have been accorded no weight.

IX. CONCLUSIONS OF LAW

1. The Commission has subject matter jurisdiction, *in rem* jurisdiction, and *in personam* jurisdiction.
2. There has been an importation into the United States, sale for importation, or sale within the United States after importation of the accused inkjet ink cartridges with printheads and components thereof, which are the subject of the alleged unfair trade allegations.
3. An industry exists in the United States that exploits U.S. Pat. Nos. 6,234,598; 6,309,053; 6,398,347; 6,481,817; and 6,402,279, as required by 19 U.S.C. § 1337(a)(2).
4. U.S. Pat. Nos. 6,234,598; 6,309,053; 6,398,347; 6,481,817; and 6,402,279 are not invalid.
5. MicroJet and PTC directly infringe claims 1-6 and 8-10 of U.S. Pat. No. 6,234,598.
6. APM does not directly infringe claims 1-5 of U.S. Pat. No. 6,234,598.

PUBLIC VERSION

7. MicroJet and PTC directly infringe claims 1-6 and 8-17 of U.S. Pat. No. 6,309,053.
8. MicroJet and PTC directly infringe claims 1, 3-5, and 8-12 of U.S. Pat. No. 6,398,347.
9. MicroJet and PTC directly infringe claims 1-14 of U.S. Pat. No. 6,481,817.
10. MicroJet and PTC directly infringe claims 9-15 of U.S. Pat. No. 6,402,279.
11. MicroJet induces infringement of U.S. Pat. Nos. 6,234,598; 6,309,053; 6,398,347; 6,481,817; and 6,402,279.
12. APM does not induce infringement of U.S. Pat. Nos. 6,234,598; 6,309,053; 6,398,347; 6,481,817; and 6,402,279.
13. There has been contributory infringement by APM of U.S. Pat. Nos. 6,234,598; 6,309,053; 6,398,347; 6,481,817; and 6,402,279.
14. There is a violation of 19 U.S.C. § 1337(a)(1) with respect to U.S. Pat. Nos. 6,234,598; 6,309,053; 6,398,347; 6,481,817; and 6,402,279.

XI. ORDER

Based on the foregoing, and the record as a whole, it is my Final Initial Determination that there is a violation of 19 U.S.C. § 1337(a)(1) in the importation into the United States, sale for importation, and the sale within the United States after importation of certain inkjet ink cartridges with printheads and components thereof.

I hereby **CERTIFY** to the Commission my Final Initial and Recommended Determinations together with the record consisting of the exhibits admitted into evidence. The pleadings of the parties filed with the Secretary, and the transcript of the pre-hearing conference and the hearing, as well as other exhibits, are not certified, since they are already in the Commission's possession in accordance with Commission rules.

CONTAINS CONFIDENTIAL BUSINESS INFORMATION

It is further **ORDERED** that:

In accordance with Commission Rule 210.39, all material heretofore marked *in camera* because of business, financial and marketing data found by the administrative law judge to be cognizable as confidential business information under Commission Rule 201.6(a), is to be given *in camera* treatment continuing after the date this investigation is terminated.

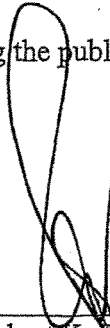
The initial determination portion of the Final Initial and Recommended Determination, issued pursuant to Commission Rule 210.42(a)(1)(i), shall become the determination of the Commission sixty (60) days after the service thereof, unless the Commission, within that period, shall have ordered its review of certain issues therein, or by order, has changed the effective date of the initial determination portion. If the Commission determines that there is a violation of 19 U.S.C. § 1337(a)(1), the recommended determination portion, issued pursuant to Commission Rule 210.42(a)(1)(ii), will be considered by the Commission in reaching a determination on remedy and bonding pursuant to Commission Rule 210.50(a).

Within ten days of the date of this document, each party shall submit to the Office of the Administrative Law Judge a statement as to whether or not it seeks to have any portion of this document deleted from the public version. The parties' submissions must be made by hard copy by the aforementioned date and must include a copy of this document with red brackets indicating any portion asserted to contain confidential business information to be deleted from the public version. The parties' submission concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.

Issued: 6/19/2011

DATE




Robert K. Rogers, Jr.
Administrative Law Judge

**CERTAIN INKJET INK CARTRIDGES
WITH PRINTHEADS AND COMPONENTS THEREOF**

Inv. No. 337-TA-723

PUBLIC CERTIFICATE OF SERVICE

I, James R. Holbein, hereby certify that the attached **INITIAL DETERMINATION** was served upon **Rett Snotherly, Esq.**, Commission Investigative Attorney, and the following parties via overnight delivery on **August 4, 2011**


James R. Holbein, Secretary
U.S. International Trade Commission
500 E Street SW, Room 112A
Washington, D.C. 20436

**FOR COMPLAINANTS HEWLETT-PACKARD COMPANY and HEWLETT-
PACKARD DEVELOPMENT COMPANY L.P.:**

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**CERTAIN INKJET INK CARTRIDGES
WITH PRINTHEADS AND COMPONENTS THEREOF**

Inv. No. 337-TA-723

PUBLIC CERTIFICATE OF SERVICE PAGE 2

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