

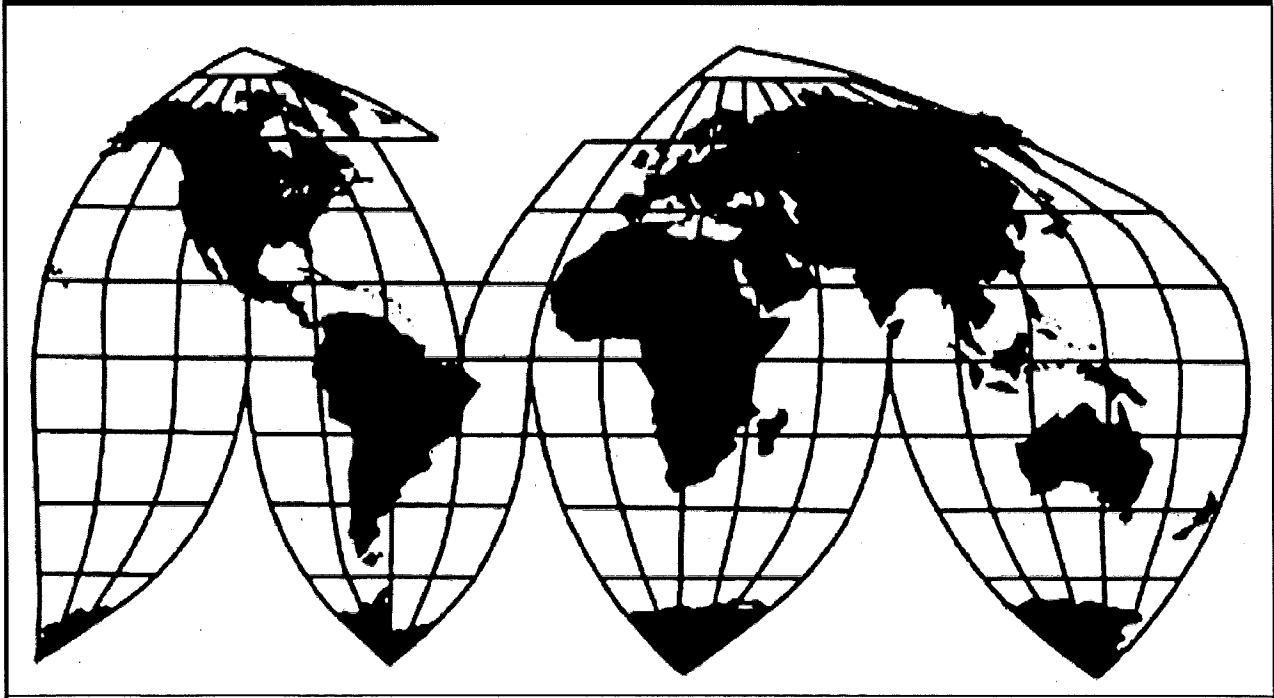
*In the Matter of*  
**Certain Computer Products, Computer  
Components and Products  
Containing Same**

Investigation No. 337-TA-628

Publication 4197

October 2010

**U.S. International Trade Commission**



Washington, DC 20436

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# **U.S. International Trade Commission**

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# U.S. International Trade Commission

Washington, DC 20436  
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*In the Matter of*

**Certain Computer Products, Computer  
Components and Products  
Containing Same**

Investigation No. 337-TA-628





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

**In the Matter of**

**CERTAIN COMPUTER PRODUCTS,  
COMPUTER COMPONENTS AND  
PRODUCTS CONTAINING SAME**

**Investigation No. 337-TA-628**

**NOTICE OF COMMISSION DECISION NOT TO REVIEW THE ALJ's FINAL  
INITIAL DETERMINATION FINDING NO VIOLATION OF SECTION 337;  
TERMINATION OF INVESTIGATION**

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission has determined not to review the presiding administrative law judge's ("ALJ") final initial determination ("ID") issued on March 16, 2009, finding no violation of section 337 of the Tariff Act of 1930, 19 U.S.C. § 1337 in this investigation.

**FOR FURTHER INFORMATION CONTACT:** Panyin 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 January 14, 2008, based on a complaint filed by International Business Machines Corporation of Armonk, New York ("IBM"). 73 *Fed. Reg.* 2275 (Jan. 14, 2008). The complaint alleged violations 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 computer products, computer components and products containing same by reason of infringement of certain claims of United States Patent Nos. 5,008,829 ("the '829 patent"); 5,249,741 ("the '741 patent"); and 5,371,852

("the '852 patent"). The complaint named as respondent ASUSTek Computer, Inc. of Taipei, Taiwan and ASUS Computer International of Fremont, California. On January 21, 2008, IBM amended the complaint and notice of investigation to add Respondents Pegatron Technology Corporation of Taipei, Taiwan and Unihan Technology Corporation, of Taipei, Taiwan, wholly owned subsidiaries of ASUSTek. The respondents are referred to collectively as "ASUS."

On August 4, 2008, the ALJ issued an ID that extended the target date for completion of the investigation to July 14, 2009. The Commission determined not to review the ID.

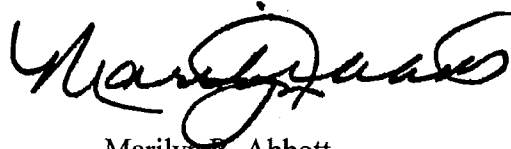
On March 16, 2009, the ALJ issued his final ID finding no violation of section 337 by ASUS. The ID included the ALJ's recommended determination on remedy and bonding. In the subject ID, the ALJ found that ASUS's products do not infringe asserted claims 1 and 2 of the '829 patent. The ALJ also found that none of the cited references anticipated claims 1 and 2 of the '829 patent or rendered them obvious. Likewise, the ALJ found that ASUS's products do not infringe asserted claim 1 of the '741 patent. The ALJ further found that none of the cited references anticipated claim 1 or rendered claim 1 of the '741 patent obvious. The ALJ also found that the '741 patent satisfied the written description and enablement requirements of 35 U.S.C. § 112, first paragraph, for claim 1. Similarly, the ALJ found that ASUS's accused products do not infringe asserted claims 1, 8, 13, 14, 22 and 23 of the '852 patent. The ALJ also found that none of the cited references anticipate the asserted claims of the '852 patent. The ALJ further found that IBM met the domestic industry requirement because a sufficient nexus existed between IBM's licensing activities and each of the asserted patents.

On March 30, 2009, IBM filed a petition, seeking review of the ALJ's ID with regards to infringement of all the patents-in-issue. That same day, ASUS filed a contingent petition, seeking review of the ALJ's findings that the '829 and '741 patents are not invalid. On April 7, 2009, ASUS filed an opposition to IBM's petition for review, and IBM filed a response to ASUS's contingent petition for review. Also on April 7, 2009, the Commission investigative attorney filed a response to both IBM's petition and ASUS's contingent petition.

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 not to review the subject ID.

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 section 210.42(h) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.42(h)).

By order of the Commission.

A handwritten signature in black ink, appearing to read "Marilyn R. Abbott". The signature is fluid and cursive, with a large initial "M" and "A".

Marilyn R. Abbott  
Secretary to the Commission

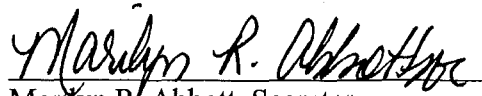
Issued: July 13, 2009

**CERTAIN COMPUTER PRODUCTS, COMPUTER  
COMPONENTS AND PRODUCTS CONTAINING  
SAME**

**337-TA-628**

**PUBLIC CERTIFICATE OF SERVICE**

I, Marilyn R. Abbott, hereby certify that the attached **NOTICE OF COMMISSION  
DECISION NOT TO REVIEW THE ALJ'S FINAL INTIAL DETERMINATION  
FINDING NO VIOLATION OF SECTION 337** has been served by hand upon the  
Commission Investigative Attorney, Vu Q. Bui, Esq., and the following parties as  
indicated, on JUL 14 2009.

  
Marilyn R. Abbott, Secretary  
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[REDACTED]

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

**In the Matter of**

**CERTAIN COMPUTER PRODUCTS,  
COMPUTER COMPONENTS AND  
PRODUCTS CONTAINING SAME**

**Investigation No. 337-TA-628**

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

Administrative Law Judge Theodore R. Essex

(March 16, 2009)

**Appearances:**

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*For the Commission Investigative Staff:*

Lynn I. Levine, Esq., Director; Spence T. Chubb, Esq., Supervising Attorney; Vu Q. Bui, Esq., Investigative Attorney of the Office of Unfair Import Investigations, U.S. International Trade Commission, of Washington, D.C.

[REDACTED]

Pursuant to the Notice of Investigation, 73 Fed. Reg. 2275 (2008), this is the Initial Determination of the in the matter of *Certain Computer Products, Computer Components and Products Containing Same*, United States International Trade Commission Investigation No. 337-TA-628. *See* 19 C.F.R. § 210.42(a).

It is held that no violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain computer products, computer components or products containing same by reason of infringement of one or more of claims 1 and 2 of U.S. Patent 5,008,829; claim 1 of U.S. Patent No. 5,249,741; and claims 1,8,13,14,22, and 23 of U.S. Patent No. 5,371,852.

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The following abbreviations may be used in this Initial Determination:

<b>CDX</b>	Complainants' demonstrative exhibit
<b>CFF</b>	Complainants' proposed findings of fact
<b>CIB</b>	Complainants' initial post-hearing brief
<b>CORFF</b>	Complainants' objections to Respondents' proposed findings of fact
<b>COSFF</b>	Complainants' objections to Staff's proposed findings of fact
<b>CPX</b>	Complainants' physical exhibit
<b>CRB</b>	Complainants' reply post-hearing brief
<b>CX</b>	Complainants' exhibit
<b>Dep.</b>	Deposition
<b>JSUF</b>	Joint Statement of Undisputed Facts
<b>JX</b>	Joint Exhibit
<b>RDX</b>	Respondents' demonstrative exhibit
<b>RFF</b>	Respondents' proposed findings of fact
<b>RIB</b>	Respondents' initial post-hearing brief
<b>ROCF</b>	Respondents' objections to Complainants' proposed findings of fact
<b>ROSFF</b>	Respondents' objections to Staff's proposed findings of fact
<b>RPX</b>	Respondents' physical exhibit
<b>RRB</b>	Respondents' reply post-hearing brief
<b>RRX</b>	Respondents' rebuttal exhibit
<b>RX</b>	Respondents' exhibit
<b>SFF</b>	Staff's proposed findings of fact
<b>SIB</b>	Staff's initial post-hearing brief
<b>SOCFF</b>	Staff's objections to Complainants' proposed findings of fact
<b>SORFF</b>	Staff's objections to Respondents' proposed findings of fact
<b>SRB</b>	Staff's reply post-hearing brief
<b>Tr.</b>	Transcript



## I. BACKGROUND

### A. Institution and Procedural History of This Investigation

By publication of a notice in the *Federal Register* on January 14, 2008, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted Investigation No. 337-TA-628 with respect to U.S. Patent Nos. 5,008,829; 5,249,741; and 5,371,852 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 computer products, computer components and products containing same by reason of infringement of one or more of claims 1 and 2 of U.S. Patent No. 5,008,829; claim 1 of U.S. Patent No. 5,249,741; and claims 1,8,13,14,22, and 23 U.S. Patent No. 5,371,852, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

73 Fed. Reg. 2275 (2008).

International Business Machines Corporation (“IBM” or “Complainant”) of Armonk, New York, is the complainant. (*Id.*) The respondents named in the Notice of Investigation were: ASUSTeK Computer, Inc. of Taipei, Taiwan and ASUS Computer International of Fremont, California (collectively “ASUS” or “Respondents”). (*Id.*) The Commission Investigative Staff (“Staff”) of the Commission’s Office of Unfair Import Investigations is also a party in this investigation. *Id.*

On January 21, 2008, IBM moved to amend the Complaint and Notice of Investigation to add respondents Pegatron Technology Corporation and Unihan Technology Corporation, which are wholly owned subsidiaries ASUSTeK and are original equipment manufacturers for it. ( JX-10C at ¶¶ 7A, 7B.) The ALJ granted the motion, which the Commission determined not to review. (*See* Order No. 4 (February 12, 2008); Notice of Commission Determination Not to

[REDACTED]

Review an Initial Determination Granting Complainant's Motion to Amend the Complaint and Notice of Investigation (March 4, 2008).)

On August 4, 2008, the ALJ issued an initial determination extending the target date in this investigation to July 14, 2009. (*See* Order No. 12 (August 4, 2008).) The Commission determined not to review the order. (*See* Notice of Commission Determination Not to Review an Initial Determination Extending the Target Date for Completion of the Investigation (August 22, 2008).)

The evidentiary hearing on the question of violation of section 337 commenced on November 17, 2008, and concluded on November 21, 2008. IBM, ASUS, and Staff were represented at the hearing. (Hearing Tr. 142:1-144:6.)

During the evidentiary hearing, ASUS moved to strike portions of the testimony of IBM's expert, Dr. Francis, regarding the disputed claim term "software communication protocol port number" in the '852 Patent because it was not in his expert reports. (Tr. at 695:11-14.) The ALJ withheld his ruling on the motion and requested further briefing from the parties. (Tr. at 697:23-698:12.) Having considered the arguments of the parties at the hearing and in their briefs, the ALJ hereby DENIES the motion to strike.

[REDACTED]

**B. The Parties**

**1. International Business Machines Corporation**

IBM is a New York corporation with its principal place of business located at New Orchard Road, Armonk, New York. (JX-8 (Amended Compl.), ¶ 3.) IBM's business focuses on information technology with products designed and developed to record, process, communicate, store and/or retrieve information. (*Id.* at ¶ 4.)

**2. ASUS**

ASUSTeK is a Taiwanese corporation with its principal place of business in Peitou, Tapei, Taiwan. (JX-10C (Supp. Resp. to Notice of Investigation and Amended Complaint), ¶6.) ASUSTeK designs, develops, and sells computer products, including notebook computers, servers, barebones and routers; computer components including motherboards and graphic cards; and products containing such computer components. (*Id.*, Confidential Ex. 1, ¶2.)

ASUS Computer International is a wholly owned subsidiary of ASUSTeK, with its principal place of business in Fremont, California, and sells and provides technical support for ASUSTeK's products. (JX-10C at ¶ 7.)

Pegatron Technology Corporation is a wholly owned subsidiary of ASUSTeK with its principal place of business in Peitou, Taipei, Taiwan and is responsible for [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (JX-10C at ¶7A.)

Unihan Technology Corporation is a wholly owned subsidiary of ASUSTeK with its principal place of business in Peitou, Taipei, Taiwan and is responsible for [REDACTED]



[REDACTED]

[REDACTED]

[REDACTED] (JX-10C at ¶7B.)

### **C. The Patents At Issue and Overview of the Technology**

This investigation pertains to U.S. Patent Nos. 5,371,852 (“the ‘852 Patent”), entitled “Method and Apparatus for Making a Cluster of Computers Appear as a Single Host on a Network”; U.S. Patent No. 5,008,829 (“the ‘829 Patent”), entitled “Personal Computer Power Supply”; and U.S. Patent No. 5,249,741 (“the ‘741 Patent”), entitled “Automatic Fan Speed Control.”

#### **1. The ‘852 Patent**

The ‘852 Patent was filed on October 14, 1992, and issued on December 6, 1994. (*See* JX-5 (‘852 Patent)).

The asserted claims of the ‘852 Patent in this investigation are claims 1, 8, 13, 14, 22 and 23. The claims read as follows:

1. A method for routing incoming messages across a boundary of a cluster of computer nodes, the cluster connected to one or more networks, comprising the steps of:

reading a software communication protocol number in a message header of the message to recognize an incoming message as a software communication protocol port type message, the message having a destination address of a gateway node within the cluster of computer nodes;

locating and reading a software communication protocol port number in the message header of the software communication protocol port type message;

matching both the software communication protocol port number and the software communication protocol number to an entry in a message switch memory, the matched software communication protocol port number entry being associated with a software communication protocol port specific function which selects a routing destination for the message from a plurality of possible destinations, the destination being a computer node in the cluster; and

[REDACTED]

routing the message to the computer node destination.

8. A method for routing incoming messages across a boundary of a cluster of computer nodes, the cluster connected to one or more networks, comprising the steps of:

reading a software communication protocol number in an IP message header to recognize the incoming message as a software communication protocol port type message, the IP message header being on a message with a destination address of a gateway within the cluster of computer nodes;

locating and reading a software communication protocol port number in the message header of the software communication protocol port type message;

matching both the software communication protocol port number and the software communication protocol number to an entry in a message switch memory, the matched software communication protocol port number entry being associated with a port specific function which selects a routing destination for the message from a plurality of possible destinations, the destination being a computer node in the cluster; and

routing the message to the computer node destination.

13. A method of routing incoming messages across a boundary of a cluster of computers, as in claim 8, where the protocol number is a UDP identifier.

14. A method of routing incoming messages across a boundary of a cluster of computers, as in claim 13, where the UDP protocol number is 17.

22. A method of routing incoming messages across a boundary of a cluster of computers, as in claim 8, where the protocol number is a TCP identifier.

23. A method of routing incoming messages across a boundary of a cluster of computers, as in claim 22, where the TCP protocol number is 6.

(*Id.*) at 20:21-46; 21:10-34,55-60; 22:24-29.). The '852 Patent names Mr. Clement R. Attanasio and Mr. Stephen E. Smith as the inventors. (*Id.*)

The '852 Patent provides a method and apparatus for enabling a cluster of computers to appear as a single computer to host computers outside the cluster. ('852 Patent at Abstract.) In the prior art, computer clusters did not appear as one entity to host computers outside the cluster

[REDACTED]

thereby requiring the host computers to individually communicate with each computer within the cluster. (*Id.* at 3:43-64.) In the present invention, the host computer only communicates with the gateway to access the cluster. (*Id.* at Abstract.) The gateway has a message switch, which processes messages crossing the gateway. (*Id.*) The message switch processes incoming and outgoing messages by changing information on the message header based on the operation of a specific routing function that is selected using port and protocol information in the messages. (*Id.*)

## 2. The '829 Patent

The '829 Patent was filed on June 14, 1990 and issued on April 16, 1991. (JX-3 ('829 Patent).) The asserted claims of the '829 Patent in this investigation are claims 1 and 2. They read as follows:

1. A microcomputer comprising:

Electrically powered data processing and storage components for processing and storing digital data, and

A pulse width modulation switching power supply for connection with an alternating current electrical main supply and for supplying direct current electrical power to said data processing and storage components for enabling operation thereof, said power supply comprising:

A controllable component for responding to the presence and absence of a low voltage direct current electrical signal by enabling and disabling the supply of electrical power to said data processing and storage components, and

A signal generator circuit operatively connected with said controllable component and with an alternating current electrical main supply for controllably deriving from the main supply a low voltage direct current signal for delivery to said controllable component, whereby a user of the microcomputer may control energization of the electrically powered data processing and storage components by controlling the application of said low voltage direct current signal from said signal generator circuit to said controllable component.

2. A microcomputer according to claim 1 wherein said controllable component comprises a pulse width modulator control circuit.

[REDACTED]

(JX-3 ('829 Patent) at (col. 6, l. 47 – col. 7, l. 8.) The '829 Patent names Roger L. Cox, Michael J. DeLoye and Robert L. Myers as the inventors. (*Id.*)

The '829 Patent relates to personal computer power supplies for supplying electrical power to electrically operated components that manipulate or store digital data. (*Id.* at Abstract.) The power supply of the '829 Patent has (1) a controllable component for responding to the presence and absence of a low voltage direct current electrical signal ("LVDC") by enabling and disabling the electrical power supply to data processing and storage components, and (2) a signal generator circuit operatively connected with the controllable component and with an alternating current (AC) electrical main supply for controllably deriving from that main supply a low voltage direct current signal for delivery to the controllable component. (*Id.*) The invention allows a user of the microcomputer to control energization of the electrically powered data processing and storage components by controlling the application of the low voltage direct current signal from the signal generator circuit to the controllable component. (*Id.*)

### **3. The '741 Patent**

The '741 Patent was filed on May 4, 1992 and issued on October 5, 1993. (JX-1 ('741 Patent).) The asserted claim of the '741 Patent in this investigation is claim 1. It reads as follows:

1. A method of cooling a computer having a plurality of components and at least one variable rate a fan cooling unit comprising the steps of:
  - a) obtaining a predetermined cooling requirement for at least one of said components; and
  - b) varying the rate of at least one of said cooling units based on the obtained cooling requirements.

[REDACTED]

(*Id.* at 5:51-57.) The '741 Patent names William R. Bistline, William C. Johnson and James M. Patterson as the inventors. (*Id.*)

The '741 Patent relates to a method of cooling a computer having a plurality of components and at least one variable rate cooling unit, *e.g.* a fan. (*Id.* at Abstract.) The '741 Patent discloses a method that includes (1) obtaining a cooling requirement for at least one of the components and (2) varying the rate of at least one of the cooling units based on the obtained cooling requirements. (*Id.*)

#### **D. The Products At Issue**

The products at issue are (1) computer products, including notebook computers, servers, barebones, and routers; (2) computer components, including motherboards and graphic cards, and (3) products containing such computer components. (JX-8 (Amended Compl.) at ¶¶ 8-10; *see also* CDX-6.)

## **II. IMPORTATION OR SALE**

The importation or sale requirement of section 337 has been satisfied. On September 18, 2008, the parties filed a Stipulation of Material Facts Relating to the Importation Requirement of 19 U.S.C. § 1337(a)(1)(B), wherein it was stipulated that ASUS "imported into the United States, sold for importation into the United States, and/or sold after importation into the United States computer products, including [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] and that IBM satisfied the importation requirement. Staff did not

oppose the stipulation and the ALJ accepted the stipulation at the hearing. (JX-15; at 30:13-14.)

### III. JURISDICTION

#### A. Personal and Subject Matter Jurisdiction

In order to have the power to decide a case, a court or agency must have both subject matter jurisdiction and jurisdiction over either the parties or the property involved. *See Certain Steel Rod Treating Apparatus and Components Thereof*, Inv. No. 337-TA-97, Commission Memorandum Opinion, 215 U.S.P.Q. 229, 231 (1981). For the reasons discussed below, the ALJ finds the Commission has jurisdiction over this investigation.

Section 337 declares unlawful the importation, the sale for importation, or the sale after importation into the United States of articles that infringe a valid and enforceable United States patent by the owner, importer, or consignee of the articles, if an industry relating to the articles protected by the patent exists or is in the process of being established in the United States. See 19 U.S.C. §§ 1337(a)(1)(B)(I) and (a)(2). Pursuant to Section 337, the Commission shall investigate alleged violations of the Section and hear and decide actions involving those alleged violations.

As set forth *supra* in Section III, IBM and ASUS have stipulated that IBM has met the importation requirement and, as such, the ALJ finds that the Commission has *in rem* jurisdiction.

The parties do not dispute that the Commission has *in personam* and *in rem* jurisdiction. (CIB at 2; RIB 7-13; SIB at 8.) ASUS has fully participated in the investigation, including participating in discovery, participating in the hearing, and filing pre-hearing and post-hearing briefs. Accordingly, the ALJ finds that ASUS has submitted to the jurisdiction of the Commission. *See Certain Miniature Hacksaws*, Inv. No. 337-TA-237, Pub. No. 1948, Initial Determination at 4, 1986 WL 379287 (U.S.I.T.C., October 15, 1986) (unreviewed by Commission in relevant part).

[REDACTED]

## B. Standing

ASUS argues that IBM lacks standing to assert the patents at issue because IBM allegedly transferred the patents in suit to Lenovo as part of its personal computing business divestiture. (RIB at 7-8.) ASUS argues that IBM has failed to demonstrate that it owns the patents in suit and, instead, has withheld critical documents that would prove ownership. (RIB at 9-10.) Specifically, ASUS argues that “Asset Purchase Agreement” and the “Patent Assignment Agreement” are insufficient to show IBM owns the patents in suit. ASUS argues that the “Seller Disclosure Letter” is required to prove if the asserted patents are owned by Lenovo. (RIB at 9-10.) ASUS further argues that [REDACTED] and [REDACTED] that, absent the production of the Seller Disclosure Letter, IBM cannot prove that it owns the patents in suit. (RIB at 11-12.)

IBM argues that it owns the patents in suit as evidenced by its certified copies of the assignments of the ‘852, the ‘829 and the ‘741 Patents to IBM. (CRB at 1.) IBM further argues that the list attached to the Patent Assignment Agreement, Exhibit A, confirms that the patents in suit were never transferred to Lenovo and that, despite being aware of the current investigation, Lenovo has never asserted ownership of the patents. (CRB at 1.)

Staff agrees that IBM owns the patents in suit and argues that the relevant divestiture documents as well as the testimony of IBM’s corporate representative, who was also a participant in the divestiture of the PC business, showed that IBM does, in fact, retain ownership of the patents in suit. (SIB at 8-10.)

Standing to sue is a threshold requirement in every federal action. *Sicom Systems, Ltd. v. Agilent Technologies, Inc.*, 427 F.3d 971, 975-76 (Fed. Cir. 2005). The party bringing the action

[REDACTED]

bears the burden of establishing that it has standing. (*Id.*); see also *Ortho Pharmaceutical Corp. v. Genetics Institute, Inc.*, 52 F.3d 1026, 1033 (Fed. Cir. 1995) (quoting *Whitmore v. Arkansas*, 495 U.S. 149, 154 (1990)) (“It is well established ... that before a federal court can consider the merits of a legal claim, the person seeking to invoke the jurisdiction of the court must establish the requisite standing to sue.”). Thus, as complainant, IBM bears the burden of proof that it has standing to pursue its infringement action against ASUS in this investigation. While the burden of persuasion remains at all times with IBM, once IBM has satisfied its initial burden of production showing that it is the owner of the asserted patents, the burden of production shifts to ASUS to rebut such a showing.

There is a presumption in patent law that an inventor owns his invention. *Israel Bio-Engineering Project v. Amgen, Inc.*, 475 F.3d 1256, 1263 (Fed. Cir. 2007). Consistent with that presumption, the “[p]atent issuance creates a presumption that the named inventors are the true and only inventors.” (*Id.*) (quoting *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1460 (Fed. Cir. 1998)). The named inventors of the ‘852 Patent are Clement R. Attanasio and Stephen E. Smith, and as such, it is presumed that Attanasio and Smith are the true and only inventors of the ‘852 Patent. (See JX-5 (the ‘852 Patent), JX-6 (the ‘852 File History).) According to the record evidence, Attanasio and Smith assigned their entire “right, title and interest” in the ‘852 Patent to IBM. (JX-7 (Compl.), Ex. 6.) This agreement is reflected in the fact that IBM is the named assignee on the face of the ‘852 Patent. (JX-5 (the ‘852 Patent). Because Attanasio and Smith are presumptively the true and only inventors of the ‘852 Patent, their agreement to assign their ownership rights in those patents to IBM makes IBM the presumptive owner of the ‘852 Patent. See *Bd. of Trs. v. Roche Molecular Sys.*, 487 F. Supp. 2d 1099, 1111 n.4 (N.D. Cal. 2007)



[REDACTED]

(“Title to the patent therefore presumptively rests with . . . the named assignee, and Roche is tasked with overcoming this presumption to defeat Stanford’s standing.”).

Similarly, the named inventors of the ‘829 Patent are Roger L. Cox, Michael J. DeLoye and Robert L. Myers, and, as such, it is presumed that Messrs. Cox, DeLoye and Myers are the true and only inventors of the ‘829 Patent. (See JX-3 (the ‘829 Patent), JX-4 (the ‘829 File History). According to the record evidence, Messrs. Cox, DeLoye and Myers assigned their entire “right, title and interest” in the ‘829 Patent to IBM. (JX-7 (Compl.), Ex. 2.) This agreement is reflected in the fact that IBM is the named assignee on the face of the ‘829 Patent. (JX-3 (the ‘829 Patent).) Because Messrs. Cox, DeLoye and Myers are presumptively the true and only inventors of the ‘829 Patent, their agreement to assign their ownership rights in those patents to IBM makes IBM the presumptive owner of the ‘829 Patent.

The named inventors of the ‘741 Patent are William R. Bistline, William C. Johnson and James M. Patterson, and as such, it is presumed that Messrs. Bistline, Johnson and Patterson are the true and only inventors of the ‘741 Patent. (See JX-1 (the ‘741 Patent), JX-2 (the ‘741 File History).) According to the record evidence, Messrs. Bistline, Johnson and Patterson assigned their entire “right, title and interest” in the ‘741 Patent to IBM. (JX-7 (Compl.), Ex. 4.) This agreement is reflected in the fact that IBM is the named assignee on the face of the ‘741 Patent. (JX-1 (the ‘741 Patent).) Because Messrs. Bistline, Johnson and Patterson are presumptively the true and only inventors of the ‘741 Patent, their agreement to assign their ownership rights in those patents to IBM makes IBM the presumptive owner of the ‘741 Patent.

Here, ASUS argues that it is IBM’s burden to prove that it still owns the patents in suit. As set forth above, IBM has proven its burden of ownership. ASUS, however, has failed to meet its burden of rebutting the presumption that IBM owns the patents in suit. The evidence shows

[REDACTED]

that the patents at issue are assigned to IBM and is sufficient to establish ownership. (JX-1 (the '741 Patent), JX-3 (the '829 Patent), JX-5 (the '852 Patent); JX-7 (Compl.), Exs. 2,4,6.) The divestiture of IBM's personal computer business to Lenovo [REDACTED]

[REDACTED] (CX-2050C at Q21-37; CX-2110C; CX-2111C; CX-2113C; CX-2114C.) The evidence shows that none of the patents in suit [REDACTED] and, therefore, none of the patents in suit have been assigned to Lenovo. (CX-2050C at Q35-37; CX-2110C-CX2114C).

ASUS has presented no evidence that would rebut the presumption that IBM owns the patents in suit. Instead, ASUS argues that (1) since the patents in suit may be included under the definition of certain terms in the Asset Purchase Agreement, *i.e.* "Business" and "Products" and (2) since those terms are defined in a "Seller Disclosure Agreement" that IBM has not produced, then there is no way to prove that the patents in suit were not transferred to Lenovo. (*See* RIB at 9-10.) ASUS further asserts that IBM is bounded by the definitions in the Patent Assignment Agreement and [REDACTED]

[REDACTED]. (RIB at 10-11.) In other words, ASUS appears to make the argument that since these specific patents [REDACTED]

[REDACTED] then IBM must prove somehow that the patents in suit have not been assigned to Lenovo and fall outside the specifically defined terms of the Asset Purchase Agreement and Patent License Agreement. ASUS further argues that since [REDACTED]

[REDACTED] then such lists cannot be relied upon. (RIB at 11.) The ALJ finds

[REDACTED]

ASUS's arguments unpersuasive and further finds that they fail to rebut IBM presumption of ownership. ASUS's argument essentially renders Exhibit A and the Letter Agreement superfluous since, according to ASUS, these lists mean nothing since IBM must prove whether any PC related patent, including the patents in suit, fall under or fall outside the scope of certain terms of the Patent Assignment Agreement or Asset Purchase Agreement regardless of whether they are listed as Exhibit A or the Letter Agreement.

The ALJ finds that the evidence is clear. IBM and Lenovo have [REDACTED]

[REDACTED]  
[REDACTED] which do not include the patents in suit. (CX-2050C at Q35-37; CX-2110C and CX2111C.) Furthermore, should either IBM or Lenovo seek [REDACTED]

[REDACTED]. (Huston, 11/17/18 Tr. 168:7-12; CX-2113C; Cx-2114 at 2.1.1.) The fact that [REDACTED]

[REDACTED] is further evidence that had the patents in suit been assigned to Lenovo or had the parties intended to assign the patents in suit to Lenovo, the parties could have easily clarified that issue. Moreover, Lenovo was aware of this investigation through a subpoena and, despite knowing of this investigation, Lenovo has not challenged IBM's ownership of the patents in any manner. (Huston, 11/17/08 Tr., 213:18-214:3) This is further reflection of the parties' intent, namely that the patents in suit were not part of the divestiture.

Therefore, the ALJ finds that IBM owns the patents in suit and has standing to bring this suit. The ALJ further finds that ASUS has failed to overcome the presumption that IBM owns the patents in suit or raise a colorable question.

## IV. CLAIM CONSTRUCTION

### A. Applicable Law

Pursuant to the Commission's Notice of Investigation, this investigation is a patent-based investigation. *See* 73 Fed. Reg. 2275 (2008). Accordingly, all of the unfair acts alleged by IBM to have occurred are instances of alleged infringement of the '852, '829 and '741 Patents. A finding of infringement or non-infringement requires a two-step analytical approach. First, the asserted patent claims must be construed as a matter of law to determine their proper scope.<sup>1</sup> Claim interpretation is a question of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998). Second, a factual determination must be made as to whether the properly construed claims read on the accused devices. (*Id.* at 976).

In construing claims, the ALJ should first look to intrinsic evidence, which consists of the language of the claims, the patent's specification, and the prosecution history, as such evidence "is the most significant source of the legally operative meaning of disputed claim language." *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *see also Bell Atl. Network Servs., Inc. v. Covad Comm'n. Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The words of the claims "define the scope of the patented invention." *Id.* And, the claims themselves "provide substantial guidance as to the meaning of particular claim terms." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006). It is essential to consider a claim as a whole when construing each term, because the context in which a term is used in a claim "can be highly instructive." *Id.* Claim terms are presumed to be used consistently throughout the patent, such that the usage of the term in one claim can often

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<sup>1</sup> Only claim terms in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int'l Trade Comm.*, 366 F.3d 1311, 1323 (Fed. Cir. 2004); *Vivid Tech., Inc. v. American Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

[REDACTED]

illuminate the meaning of the same term in other claims. *Research Plastics, Inc. v. Federal Pkg. Corp.*, 421 F.3d 1290, 1295 (Fed. Cir. 2005). In addition:

. . . in clarifying the meaning of claim terms, courts are free to use words that do not appear in the claim so long as the resulting claim interpretation . . . accord[s] with the words chosen by the patentee to stake out the boundary of the claimed property.

*Pause Tech., Inc. v. TIVO, Inc.*, 419 F.3d 1326, 1333 (Fed. Cir. 2005).

Some claim terms do not have particular meaning in a field of art, in which case claim construction involves little more than applying the widely accepted meaning of commonly understood words. *Phillips*, 415 F.3d at 1314. Under such circumstances, a general purpose dictionary may be of use.<sup>2</sup> The presumption of ordinary meaning, however, will be “rebutted if the inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1091 (Fed. Cir. 2003).

Sometimes a claim term will have a specialized meaning in a field of art, in which case it is necessary to determine what a person of ordinary skill in that field of art would understand the disputed claim language to mean, viewing the claim terms in the context of the entire patent. *Phillips*, 415 F.3d at 1312-14; *Vitronics*, 90 F.3d at 1582. Under such circumstances, the ALJ must conduct an analysis of the words of the claims themselves, the patent specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, as well as the meaning of technical terms and the state of the art. *Id.*

A patentee may deviate from the conventional meaning of claim term by making his or her intended meaning clear (1) in the specification and/or (2) during the patent’s prosecution

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<sup>2</sup> Use of a dictionary, however, may extend patent protection beyond that to which a patent should properly be afforded. There is also no guarantee that a term is used the same way in a treatise as it would be by a patentee. *Id.* at 1322.

[REDACTED]

history. *Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed. Cir. 1984). If a claim term is defined contrary to the meaning given to it by those of ordinary skill in the art, the specification must communicate a deliberate and clear preference for the alternate definition. *Kumar v. Ovonic Battery Co.*, 351 F.3d 1364, 1368 (Fed. Cir. 2003). In other words, the intrinsic evidence must “clearly set forth” or “clearly redefine” a claim term so as to put one reasonably skilled in the art on notice that the patentee intended to so redefine the claim term. *Bell Atl.*, 262 F.3d at 1268.

When the meaning of a claim term is uncertain, the specification is usually the first and best place to look, aside from the claim itself, in order to find that meaning. *Phillips*, 415 F.3d at 1315. The specification of a patent “acts as a dictionary” both “when it expressly defines terms used in the claims” and “when it defines terms by implication.” *Vitronics*, 90 F.3d at 1582. For example, the specification “may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents.” *Phillips*, 415 F.3d at 1323. “The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Id.* at 1316. However, as a general rule, particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Markman*, 52 F.3d at 979.

The prosecution history “provides evidence of how the inventor and the PTO understood the patent.” *Phillips*, 415 F.3d at 1317. For example, the prosecution history may inform the meaning of the claim language by demonstrating how an inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it otherwise would be. *Vitronics*, 90 F.3d at 1582-83; *see also Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) (stating, “The purpose of consulting the

[REDACTED]

prosecution history in construing a claim is to exclude any interpretation that was disclaimed during prosecution.”); *Microsoft Corp. v. Multi-tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (stating, “We have held that a statement made by the patentee during prosecution history of a patent in the same family as the patent-in-suit can operate as a disclaimer.”). The prosecution history includes the prior art cited, *Phillips*, 415 F.3d at 1317, as well as any reexamination of the patent. *Intermatic Inc. v. Lamson & Sessions Co.*, 273 F.3d 1355, 1367 (Fed. Cir. 2001).

Differences between claims may be helpful in understanding the meaning of claim terms. *Phillips*, 415 F.3d at 1314. A claim construction that gives meaning to all the terms of a claim is preferred over one that does not do so. *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir.), *cert. denied*, 546 U.S. 972 (2005); *Alza Corp. v. Mylan Labs. Inc.*, 391 F.3d 1365, 1370 (Fed. Cir. 2004). In addition, the presence of a specific limitation in a dependent claim raises a presumption that the limitation is not present in the independent claim. *Phillips*, 415 F.3d at 1315. This presumption of claim differentiation is especially strong when the only difference between the independent and dependent claim is the limitation in dispute. *SunRace Roots Enter. Co., v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003). “[C]laim differentiation takes on relevance in the context of a claim construction that would render additional, or different, language in another independent claim superfluous.” *AllVoice Computing PLC v. Nuance Comm’ns, Inc.*, 504 F.3d 1236, 1247 (Fed. Cir. 2007).

The preamble of a claim may also be significant in interpreting that claim. The preamble is generally not construed to be a limitation on a claim. *Bell Comm’ns Research, Inc. v. Vitalink Comm’ns Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995). However, the Federal Circuit has stated that:

[A] claim preamble has the import that the claim as a whole suggests for it. In other words, when the claim drafter chooses to use both the preamble and the

[REDACTED]

body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects.

*Eaton Corp. v. Rockwell Int'l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003). If said preamble, when read in the context of an entire claim, recites limitations of the claim, or if the claim preamble is “necessary to give life, meaning, and vitality” to the claim, then the claim preamble should be construed as if in the balance of the claim. *Kropa v. Robie*, 187 F.2d 150, 152 (CCPA 1951); *see also Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997); *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989). In addition:

[W]hen discussing the “claim” in such a circumstance, there is no meaningful distinction to be drawn between the claim preamble and the rest of the claim, for only together do they comprise the “claim.” If, however, the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention’s limitations, but rather merely states the purpose or intended use of the invention, then the preamble may have no significance to claim construction because it cannot be said to constitute or explain a claim limitation.

*Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999).

In *Pitney Bowes*, the claim preamble stated that the patent claimed a method of, or apparatus for, “producing on a photoreceptor an image of generated shapes made up of spots.” *Id.* at 1306. The Federal Circuit found that this was not merely a statement describing the invention’s intended field of use, but rather that said statement was intimately meshed with the ensuing language in the claim. *Id.* For example, both of the patent’s independent claims concluded with the clause, “whereby the appearance of smoothed edges are given to the generated shapes.” *Id.* Because this was the first appearance in the claim body of the term “generated shapes,” the Court found that it could only be understood in the context of the preamble statement “producing on a photoreceptor an image of generated shapes made up of



spots.” *Id.* The Court concluded that it was essential that the preamble and the remainder of the claim be construed as one unified and internally consistent recitation of the claimed invention.

*Id.*

Finally, when the intrinsic evidence does not establish the meaning of a claim, the ALJ may consider extrinsic evidence, *i.e.*, all evidence external to the patent and the prosecution history, including inventor testimony, expert testimony and learned treatises. *Phillips*, 415 F.3d at 1317. Extrinsic evidence may be helpful in explaining scientific principles, the meaning of technical terms, and terms of art. *Vitronics*, 90 F.3d at 1583; *Markman*, 52 F.3d at 980. However, the Federal Circuit has generally viewed extrinsic evidence as less reliable than the patent itself and its prosecution history in determining how to define claim terms. *Phillips*, 415 F.3d at 1318. With respect to expert witnesses, any testimony that is clearly at odds with the claim construction mandated by the claims themselves, the patent specification, and the prosecution history should be discounted. *Id.* at 1318.

If the meaning of a claim term remains ambiguous after a review of the intrinsic and extrinsic evidence, then the patent claims should be construed so as to maintain their validity. *Id.* at 1327. However, if the only reasonable interpretation renders a claim invalid, then the claim should be found invalid. *See Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999).

## **B. The Level of Ordinary Skill in the Art**

### **1. The ‘852 Patent**

IBM argues that the level of ordinary skill in the art during the relevant time period for the ‘852 Patent would be a person who had at least five years of education in the computer science or networking fields and /or experience in the networking industry. (CX-2052C (Francis Direct) at Q39.) ASUS argues that the level of ordinary skill in the art would be one who would

[REDACTED]

have at least a Bachelor's degree in Electrical Engineering or the equivalent education and from four to six years experience in the design of computer systems, or the equivalent work experience, education, or knowledge of computer system design. (RRX-58C (Oliver Rebuttal) at Q 8-9.) Staff notes that the parties generally agree on the level of one of ordinary skill in the art and that the differences are not enough to affect any parties' opinions or analysis. (SIB at 52.)

The ALJ finds that one of ordinary skill in the art would have at least a Bachelor's degree in electrical engineering or the equivalent education and from four to six years experience in the design of computer systems, or the equivalent work experience, education, or knowledge of computer system design.

## 2. The '829 Patent

IBM argues that one of ordinary skill in the art would have a Bachelor's degree in electrical engineering and two years of relevant experience. (CX-2053C (Phinney Direct) at Q43.) ASUS argues that a person of ordinary skill in the art would have at least an advanced degree, *e.g.* a Master's degree, in science or engineering, such as electrical and electronic engineering, physics, or computer engineering, and one or more years of experience in electrical/electronic design or integrated circuit design, or a Bachelor's degree in science or engineering, such as electrical and electronic engineering, physics, or computer engineering, and three or more years of experience in electrical/electronic design or integrated circuit design. (RX-25C (Madisetti Direct) at Q 37.) Staff notes that, despite the parties' differences, the parties generally agree on the level of one of ordinary skill in the art and that the differences are not enough to affect any parties' opinions or analysis. (SIB at 17-18.)

The ALJ finds that one of ordinary skill in the art for the '829 Patent would have at least a Bachelor's degree in science or engineering, such as electrical, electronic, or computer

[REDACTED]

engineering, and two to three years or more of relevant experience, or would have an advanced degree, *e.g.*, a Master's degree in science or engineering, such as electrical, electronic, or computer engineering, and one or more years of relevant experience.

### 3. The '741 Patent

IBM argues that one of ordinary skill in the art would have at least a B.S. in computer science or electrical engineering and two years of experience in computer engineering. (CX-2051C (Polish Direct) at Q 38-40.) ASUS argues that one of ordinary skill in the art would have at least a bachelor's degree in electrical or computer engineering and two years of experience in computer system design. (RX-26C (Stevenson Direct) at Q506.) Staff notes that the parties generally agree on the level of one of ordinary skill in the art and that the differences are not enough to affect any parties' opinions or analysis. (SIB at 32.)

The ALJ finds that level of ordinary skill in the art IBM and ASUS offer different opinions with respect to the level of ordinary skill in the art for the '741 Patent. *See* CX-2054C (Polish Wit. Stat.) at ¶¶ 38-40; RX-26 (Stevenson Wit. Stat.) at ¶¶ 5-6.) IBM's expert, Dr. Polish, testified that a person of ordinary skill in the would have at least a B.S. in Computer Science or Electrical Engineering and two years of experience in Computer Engineering. (CX-2054C (Polish Wit. Stat.) at ¶¶ 38-40.) ASUS's expert, Dr. Stevenson, testified that a person of ordinary skill in the art would have at least a bachelor's degree in Electrical or Computer Engineering and two years of experience in computer system design. (RX-26 (Stevenson Wit. Stat.) at ¶¶ 5-6.) The levels of ordinary skill in the art for the '741 patent proposed by IBM and ASUS are markedly similar. Having considered both parties proposals, the ALJ finds that for the '741 Patent a person of ordinary skill in the art would have at least a B.S. in Computer Science

[REDACTED]

or Electrical Engineering and at least two years of experience in computer engineering or computer system design.

### C. The '852 Patent

#### 1. "Routing incoming messages across a boundary of a cluster of computer nodes"

IBM argues that "routing incoming messages across a boundary of a cluster of computer nodes" means "routing incoming messages from remote hosts on one or more external networks, such as the Internet, across the connection point between the external network and a gateway node to one or more computer nodes connected together by an interconnect." (CIB at 51.) IBM further defined "cluster of computer nodes" to mean "two or more computer nodes connected together by a communication link, called an interconnect, and including a gateway node connected to receive incoming messages from an external network." (CIB at 51.) IBM asserts that the '852 patent is directed at a novel method for making a cluster of any general purpose computer (or the like) appear as a single host computer as a network and is not limited to the field where computers must share resources and function as a single unit to increase computer power. (CIB at 52.)

ASUS asserts that "routing incoming messages across a boundary of a cluster of computer nodes" means "routing messages that originate from outside the cluster across a boundary of a plurality of clustered computers (*i.e.*, a single computer image, clustered computing)." (RIB at 88.) ASUS further argues that "cluster" is more than just a network of computers and requires "functionality that allows the cluster to share work or processes, increasing computer power," which is its plain and ordinary meaning. (RIB at 88-89.) ASUS argues that the objective of the '852 Patent is to increase computer power by allowing the

[REDACTED]

computer nodes to share common resources and cooperate in doing work. (RIB at 89-90.) Staff agrees. (SIB at 54-57.)

The ALJ finds that “routing incoming messages across a boundary of a cluster of computer nodes” means “routing messages that originate from outside the cluster across a boundary of a plurality of clustered computers (*i.e.*, a single computer image, clustered computing), wherein the cluster of computer nodes share common resources and cooperate in doing work.” IBM’s proposed construction essentially describes the “cluster of computers” as simply multiple computers on a network and eliminates any cluster functionality. The claim language and specification, however, all support the requirement that the “cluster of computer nodes” be given its plain and ordinary meaning, namely functionality that allows the cluster to share work or processes, increasing computer power. (*See* RRX-038; RRX-039.)

Claims 1 and 8 distinguish between a “cluster of computer nodes” and “networks.” Specifically, both claims describe “[a] method for routing incoming messages across a boundary of a *cluster of computer nodes*, the cluster connected to one or more *networks*,” thereby distinguishing a “network” from a “cluster of computer nodes.” (JX-5 (‘852 Patent), 20:21-23; 21:10-12); *see CAE Screenplates Inc. v. Heinrich Fielder GmbH & Co.*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) (“In the absence of any evidence to the contrary, we must presume that the use of these different terms in the claims connotes different meanings.”) In addition, unasserted claim 35 further distinguishes a “network” from a “cluster of computers” as it describes “[a]n apparatus for routing messages across a boundary of a cluster of computers *on a network*.” (JX-5 (‘852 Patent) at 23:13-14.) (emphasis added).

The specification also supports this construction. The specification describes a cluster as:

clusters 100 comprise two or more computers (also called nodes or computer nodes 105 through 109) connected together by a communication means 110 in

[REDACTED]

order to exchange information. Nodes (105 through 109) may share common resources and cooperate in doing work.

(JX-5 ('852 Patent) at 1:45-50.) Similarly, in describing how the current invention is an improvement over the prior art, the specification describes cluster functionality, rather than just a simple network of computers:

Accordingly, there has been a long felt need for a cluster of computers which presents a single computer image, i.e., looks like a single computer, to computers external to the cluster (gateway) boundary. A single computer image cluster *would have the capability of adding or deleting computers within the cluster; changing and/or moving processes, operating systems, and data among computers within the cluster; changing the configuration of cluster resources; redistributing tasks among the computer within the cluster; and redirecting communications from a failed cluster node to an operating node, without having to modify or notify any computer outside the cluster.* Further, computers outside the cluster would be able to access information or run processes within the cluster without changing the environment where they are operating.

(*Id.* at 4:8-24) (emphasis added). Furthermore, the patentees stated that the objectives of the invention included not only “routing messages across the boundary of a cluster of computers to make the cluster of computers on a network appear as a single computer image to host computers on the network outside the cluster,” but also to provide a cluster of computers that can route messages such that “work requests from outside the cluster can be evenly distributed among the computer nodes in the cluster.” (*Id.* at 4:43-46; 66-68.)

The extrinsic evidence also supports such a construction. In its Amended Complaint, IBM stated that the '852 Patent disclosed an improved method for efficient networking of computers “because *workloads can be shared evenly through the cluster* and computers outside the cluster need not be informed of hardware or software changes within the cluster.” (JX-8 (Amended Complaint) at ¶ 33) (emphasis added). Similarly, Mr. Clement Attanasio, a named inventor on the '852 Patent, testified that a cluster provided “increased computer power”:

[REDACTED]

Q. Now, I want to review some of the concepts, some of the terminology. A cluster is a loosely coupled system, true?

A. Yes, if we understand what loosely coupled means.

Q. Okay. Well, *a loosely coupled system allows for increased computing power; is that right?*

A. *Yes, that's true.*

Q. In a cluster, multiple computers appear as one computer, true?

A. Externally to the cluster, yes.

Q. And the cluster has a computing capacity for all its nodes, right?

A. It can, yeah.

Q. *If I have a cluster with four nodes, that cluster to the rest of the world appears as one computer with the computer power of four computers?*

A. *In the best case, yeah. Actually, it could be -- I suppose it could be more than that, depending.*

Q. All right. But that's a sort of typical case?

A. That's a reasonable interpretation, right.

(Attanasio, Tr. 547:13-548:13) (emphasis added). Mr. Attanasio further testified that an objective of the invention was to evenly balance the work load among the different nodes and, further, that IBM's Network Dispatcher, a commercial embodiment of the invention, did just that.

(Attanasio, Tr., 548:14-549:7; 552:7-13.)

The ALJ finds that IBM's proposed construction is incomplete. While it describes all of the physical components of the computer cluster, it fails to take into account that the invention is also directed at cluster functionality. IBM argues that such a construction improperly reads extraneous claim limitations into the claims and that there is no requirement that the cluster "must share work or processes" only that the cluster "may" share work or processes. (CRB at

[REDACTED]

26-30.) IBM further argues that “[t]he principle objective of the patent is to make a cluster of computers appear as a single computer by providing a single address for the cluster (the address of the gateway).” (CRB at 27.) However, as set forth above, the specification clearly indicates that an objective of the invention goes beyond simply “mak[ing] a cluster of computers appear as a single computer by providing a single address for the cluster” but also includes “the capability of adding or deleting computers within the cluster; changing and/or moving processes, operating systems, and data among computers within the cluster; changing the configuration of cluster resources; redistributing tasks among the computer within the cluster; and redirecting communications from a failed cluster node to an operating node, without having to modify or notify any computer outside the cluster.” (JX-5 (‘852 Patent) at 4:13-21; *see also* “Objectives” in the ‘852 Patent (“A further objective of this invention is an improved method and apparatus for routing messages across the boundary of a cluster of computers so that work requests from outside the cluster can be evenly distributed among the computer nodes in the cluster.”).) Thus, in addition to the physical components of a cluster, the invention is clearly directed at the cluster’s ability to evenly distribute work load and “share work or processes.”

Therefore, the ALJ finds that “routing incoming messages across a boundary of a cluster of computer nodes” means “routing messages that originate from outside the cluster across a boundary of a plurality of clustered computers (*i.e.*, a single computer image, clustered computing), wherein the cluster of computer nodes share common resources and cooperate in doing work.”

**2. “reading a software communication protocol number in a message header of the message to recognize an incoming message as a software communication protocol port type message.”**



[REDACTED]

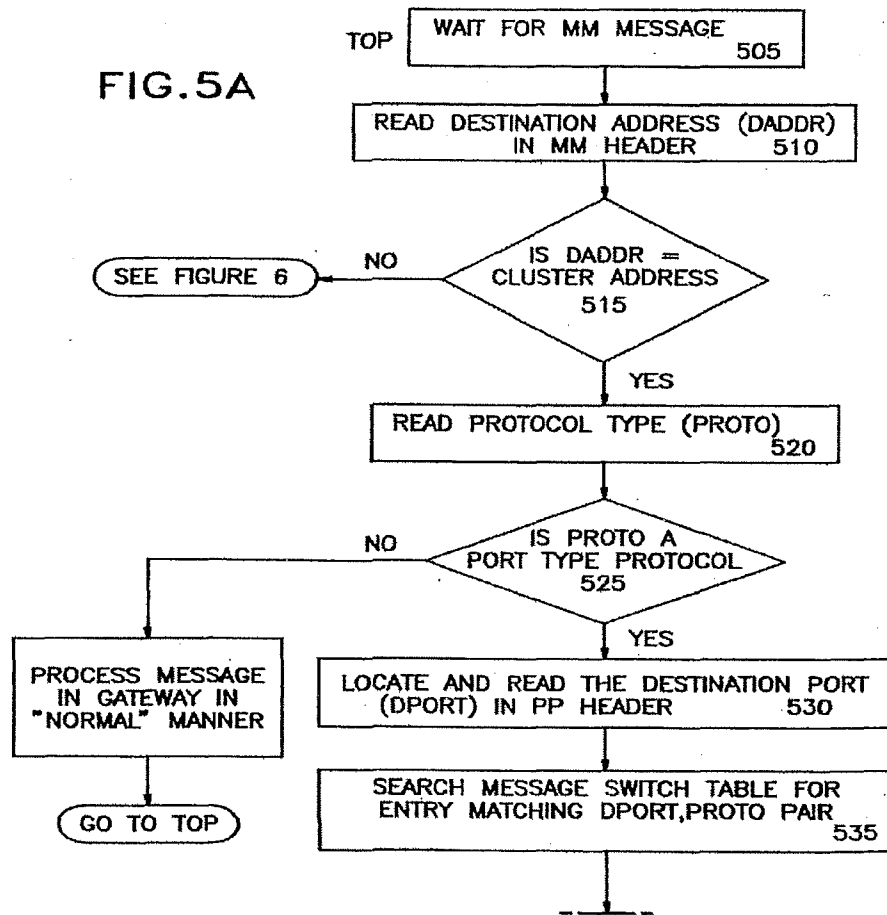
ASUS argues that this claim term should be construed to clarify that “to ‘recognize’ a message as a ‘software communication protocol port type message’ means distinguishing messages that *are* ‘port type messages’ from those that are not.” (RIB at 99) (emphasis in original). ASUS argues that the clarification is necessary because IBM’s expert failed to apply this limitation to his infringement analysis, which, according to ASUS, implies that IBM considered this “recognize” step as meaningless. (RIB at 99.) Staff agrees with ASUS arguing that the “recognize” step in the limitation is distinct from the “read” step and that the step is performed to recognize whether the incoming message is a “software communication protocol port type message” or not. (SIB at 57-58.)

IBM argues that there is no real dispute as to the meaning of the claim and that its construction “plainly requires reading the number of value of the protocol [ ] to recognize an incoming message as a protocol port type message.” (RRB at 30.)

The ALJ finds that since IBM concedes that there is no real dispute as to the meaning of the claim, ASUS proposed definition is acceptable. Therefore, the ALJ finds that this claim limitation requires the discrete step of recognizing the incoming message as a software communication protocol port type message or as a non-software communication protocol port type message. The specification supports such a construction as it describes two separate and discrete steps, namely reading the protocol field and then recognizing the protocol as a port type message:

Box 520 begins analysis of the MM header by reading the protocol field in the MM header. In a given MM protocol, the protocol field is positioned in a pre-determined place in the header. For instance, the preferred embodiment uses IP which has its protocol field 347 starting at bit position 8 in the third 32 bit word of the header. (See FIG. 3C). The value of the protocol field in the MM header is designated as PROTO in FIG. 5.

In decision block 525 PROTO, the value of the protocol field in the MM header is compared to a list of known protocol values residing in a table or list in the gateway. If PROTO matches entries in the table which are port type protocols the process continues. If PROTO does not match entries which are port type protocols, the MM message is processed as it otherwise would be. (Note that a port type message uses protocols which require ports on both the source and destination computers in order to establish communications.)



(‘852 Patent 12:25-34; Fig 5A).

Therefore, the ALJ finds that “reading a software communication protocol number in a message header of the message to recognize an incoming message as a software communication protocol port type message” requires the discrete step of recognizing the incoming message as a software communication protocol port type message or as a non-software communication protocol port type message.

[REDACTED]

### 3. “gateway node within the cluster of computer nodes”

IBM argues that the “gateway node within the cluster of computer nodes” means “the computer node that is one of the two or more computer nodes connected together by an interconnect and that connects to one or more external networks, such as the Internet, at a boundary and receives incoming messages from remote hosts on the external network arriving at the cluster.” (CIB at 55.) IBM argues that ASUS’s proposed construction is incorrect because as it is based on ASUS’s erroneous construction of “cluster,” it reads extraneous limitations into the claim, namely that a computer must serve as a gateway and that the gateway must participate in the shared tasks according to ASUS’s incorrect construction of computer. (CIB at 55-56.)

ASUS asserts that the claim term means “a computer (not just a device) that serves as the gateway that is within the cluster of (one of the) computer nodes.” (RIB at 100.) ASUS further argues that the gateway participates in work and/or process sharing of the cluster. (RRB at 59-60.) Staff agrees. (SIB at 58-60.)

Based on the ALJ’s construction of “cluster of computer nodes” *supra*, the ALJ finds that “gateway node within a cluster of computer nodes” means “a computer (not just a device) that serves as the gateway that is within the cluster of (one of the) computer nodes.” The ALJ further finds that the gateway participates in work or process sharing of the cluster.

The specification supports such a construction. The specification specifically and repeatedly states that the gateway is a computer node in the cluster:

One of the computers in the cluster, serving as a gateway, is connected to one or more external computers and/or clusters (hosts) through another communication link called a network. A gateway can be connected to more than one network and more than one node in the cluster can be a gateway.

The cluster comprises a plurality of computer nodes (105 through 109) one of which is a gateway 109.

[REDACTED]

(JX-5 ('852 Patent) at 5:16-21; 6:19-23.) Since the gateway node is “within the cluster” and is “one of the computers in the cluster, serving as a gateway,” then it must necessarily participate in the work or process sharing of the cluster and cannot be simply a “device.” (*Id.* at 7:38-40 (“One or more of the nodes in the cluster connects to one or more networks 120 and performs as a gateway 109.”); 18:58-59 (“On each node of the cluster, including the gateway, the normal rlogin daemon is started.”); 20:29-30 (“the message having a destination address of a gateway node within the cluster of computer nodes”); *see also supra* Section C.1 (discussing “cluster of computer nodes”).) The specification also supports the ALJ’s construction that gateway node must also act or serve as an actual gateway:

The gateway is connected with a bidirectional communication link 127 to a network 120. A boundary 125 is defined at the connection point between the network 120 and the gateway 109. Computers, called hosts 130, connect to the network 120 and can communicate with nodes within the cluster by passing messages through the gateway 109. An incoming message 210 is shown as being sent from a host 130, passing through the cluster boundary 125, a gateway port 230, a gateway message switch 240, a gateway routing function 250, the interconnect 110, and ultimately to the destination, the destination node 107 in the cluster 200. In a similar manner, an outgoing message 220, is shown originating at a source node 105 within the cluster 200; passing through the interconnect 110, gateway message switch 240, gateway port 230, cluster boundary 125, and ultimately to the destination host 130.

(*Id.* at 6:26-42.)

Therefore, the ALJ finds that “gateway node within a cluster of computer nodes” means “a computer (not just a device) that serves as the gateway that is within the cluster of (one of the) computer nodes.”

**[REDACTED]**

**4. “matching both the software communication protocol port number and the software communication protocol number to an entry in a message switch memory, the matched software communication protocol port number entry being associated with a software communication protocol port specific function which selects a routing destination for the message from a plurality of possible destinations”**

As an initial matter, the parties agree that the first portion of the claim requires that both the port and protocol numbers of an incoming message be matched to a singular entry in a singular table in memory. (CIB at 57-63; RIB at 101, note 18; SIB at 59-61.) The parties’ dispute focuses on the meaning of the latter part of the claim, namely “protocol port specific function which selects a routing destination from a plurality of possible destinations.”

IBM argues that the “protocol port specific function which selects a routing destination from a plurality of possible destinations” means “a routing function which processes the message so that the message is routed to the destination computer node selected from two or more of the computer nodes in the cluster.” (CIB at 57.) IBM further argues that “routing function” and “protocol port specific function” are used interchangeably in the patent. IBM asserts that the specification teaches that the protocol port specific function is linked in the memory of the gateway to a matched protocol and port value entry that is used to select a destination node from a plurality of nodes in the cluster and is used to alter the message header of an incoming message to include the address of the selected node for routing the incoming message to that node. (CIB at 57.) As for ASUS’s proposed construction, IBM asserts that it excludes the function that selects a computer node address from a table of predetermined addresses stored in the gateway, which is erroneously based on a reading of a limited section of the written description while ignoring the entirety of the patent and excludes a preferred embodiment. (CIB at 57-59.)

ASUS asserts that this means that “the ‘protocol port specific function’ must ‘select’ the destination, and that ‘selection’ is ‘from a plurality of possible destinations’.” (RIB at 100-101.)

[REDACTED]

ASUS asserts that this requires the protocol port specific function to (1) choose an appropriate destination and (2) the selection must be made from a specific pool that includes more than one possible destination for a given protocol/port pair. (RIB at 101.) ASUS asserts that IBM's argument derogates both these requirements by simply construing the "port protocol specific function" as merely a generic routing function. (RIB at 101-102.) Staff agrees. (SIB at 60-61.)

The ALJ finds that "protocol port specific function which selects a routing destination from a plurality of possible destinations" means that the protocol port specific function actually selects the routing destination from a plurality of possible destinations. It requires more than simply "processing" the incoming message and automatically routing the message to a predetermined destination. The claim language, specification and prosecution history all support this construction.

The claim language specifically calls for a "protocol port specific function which selects a routing destination for the message from a plurality of possible destinations." (JX-5 ('852 Patent) at 20:40-42.) Thus, the claim language requires that the function (1) select or choose a routing destination and (2) that such a destination is chosen from at least two possible nodes. A "protocol port specific function" is more than simply a "routing function for processing the incoming message" to determine the routing destination and it is not "interchangeable" with "routing function" as asserted by IBM. Indeed, the claims themselves distinguish between the "routing function" and the "protocol port specific function." Claim 35 explicitly and expressly claims a "routing function" and states (in relevant part):

An apparatus for routing messages across a boundary of a cluster of computers on a network, comprising:

one or more routing functions, residing in the message switch table, *one of the routing functions associated with the matched table entry which is used for directing messages crossing the cluster boundary into the cluster to a destination*

[REDACTED]

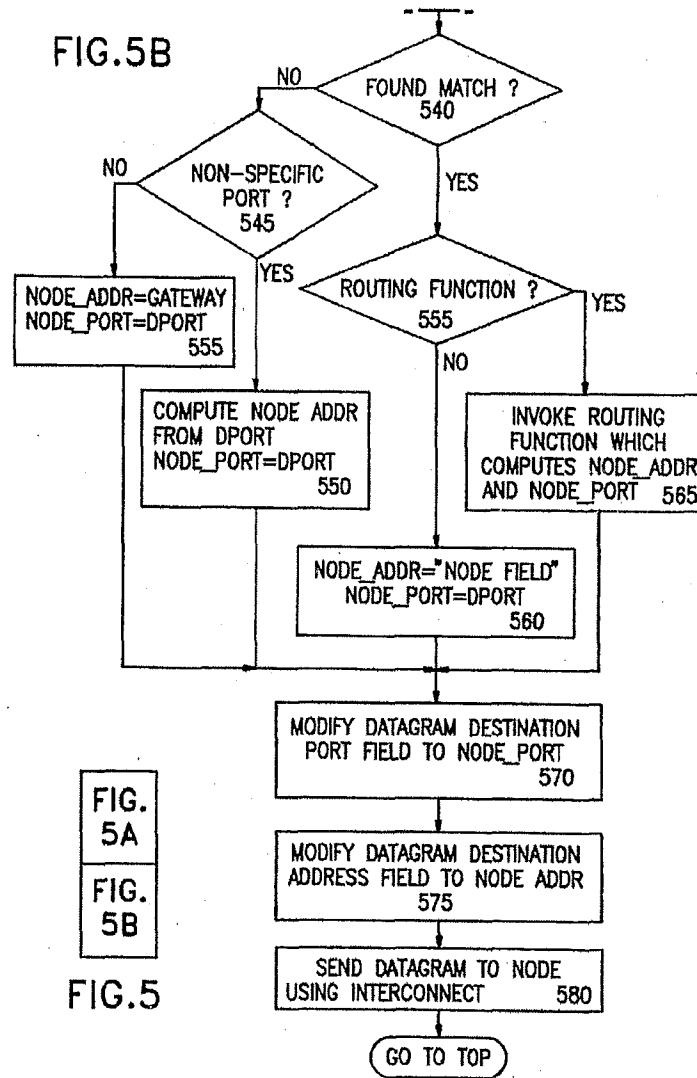
*node within the cluster*, the destination node being determined by the message switch using information on the message

(‘852 Patent 23:13-24:19) (emphasis added). Thus, claim 35 describes the “routing function” as “directing messages crossing the cluster boundary into the cluster to a destination node within the cluster,” which is clearly distinguishable from a “protocol port specific function” which “selects a routing destination for a message from a plurality of possible destinations.” (JX-5 (‘852 Patent), claims 1 and 35) (emphasis added). See *AllVoice Computing PLC v. Nuance Communs., Inc.*, 504 F.3d 1236, 1247 (Fed. Cir. 2007) (“claim differentiation takes on relevance in the context of a claim construction that would render additional, or different, language in another independent claim superfluous.”) (citing *Curtiss-Wright Flow Control Corp., v. Velan, Inc.*, 438 F.3d 1374, 1381 (Fed. Cir. 2006); see also *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (“Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.”))

The specification further supports this construction. The written description distinguishes between a “protocol port specific function” that selects a destination from a plurality of possible destination from other routing methods. In one method taught by the ‘852 Patent which is not the protocol part specific function, the destination for an incoming message is predetermined based on the port/protocol and, based on the port/protocol, the destination is looked up on a table:

Decision block 555 determines how incoming messages are handled if there is a matched pair in the message switch table. The decision is based on whether or not there is a routing function (418 in FIG. 4) associated with the matched entry in the message switch table.

If there is no routing function 415 (the routing function is NULL) in the matched message switch table entry, the incoming message is processed as shown in box 560. In these cases, the new NODE\_ADDR is set equal to the value in the node field (416 in FIG. 4) of the message switch table. The new NODE\_PORT is again unchanged, i.e., it is set equal to DPORT. Incoming messages are processed in this way if there is *only one node in the cluster which is assigned a particular port and protocol pair*.





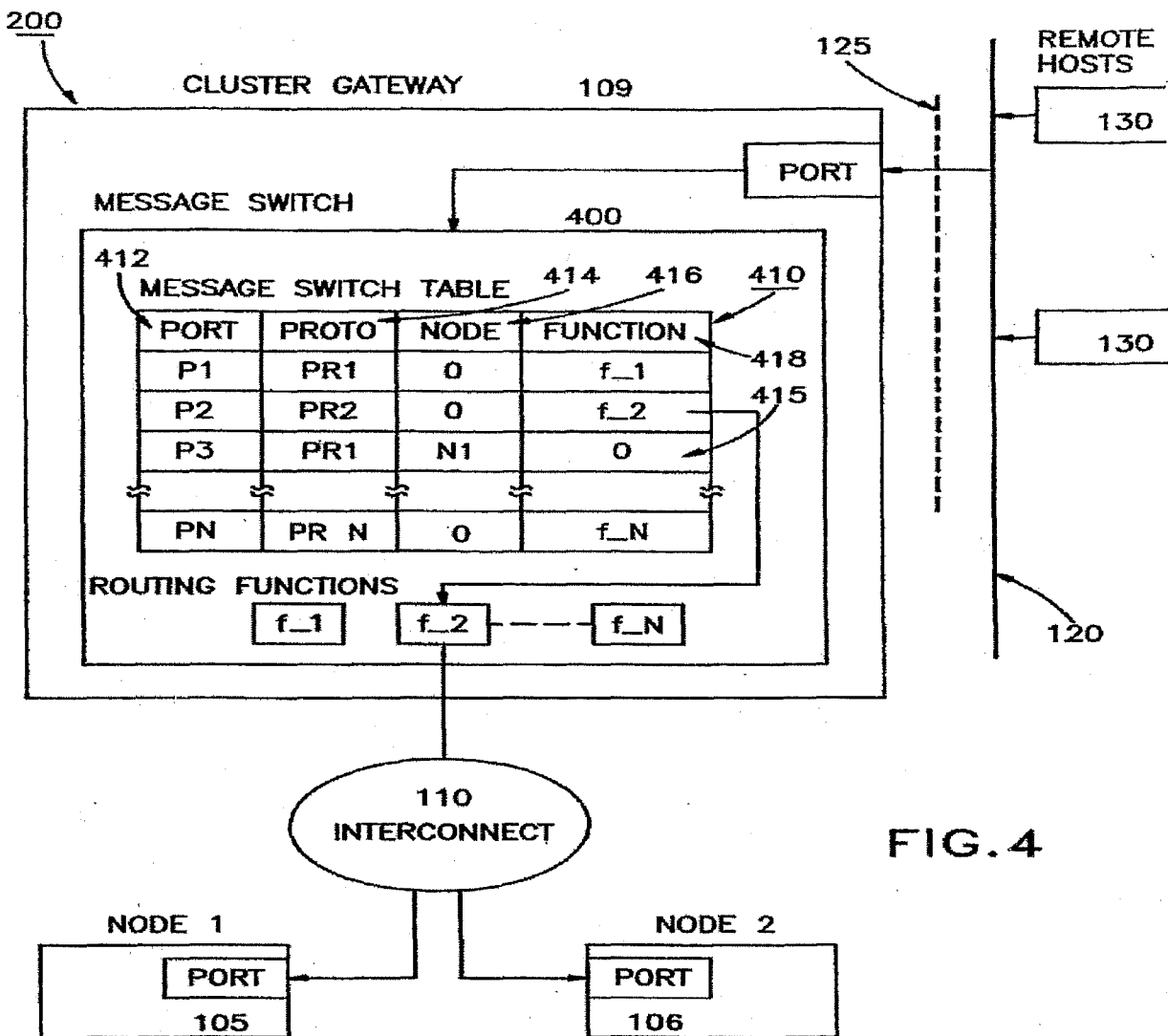


FIG. 4

(‘852 Patent 13:27-41, Figs 4, 5B)(emphasis added). However, in another method, the destination for an incoming message is selected from a plurality of possible destinations:

The last group of incoming messages are processed as shown in box 565. These messages have a matched pair entry in the message switch table which has a routing function designated in the table (418 in FIG. 4). These routing functions may access information which is in the MM header, PP header, and/or data fields and use this information to calculate the new destination address (NODE\_ADDR) and port number (NODE\_PORT). The same routing function may be used for different entries in the message switch table or the routing functions can be unique to each entry.

[REDACTED]

(*Id.* at 13:42-52; Figs. 4, 5B)(emphasis added).

The specification further supports the ALJ's construction because it explains that a benefit in using a port protocol specific function is to share the workload of a particular port over multiple nodes in the cluster:

Message switch routing function allow a port number and protocol pair to be used on more than one node. The need for this occurs when one wants to run an application/service which is associated with a specific well-known port number on more than one node.

(JX-5 ('852 Patent) at 13:53-57; *see also* 19:57-61 (“[S]ervice associated with a protocol port (NFS, MOUNT, RLOGIN) can be distributed over multiple nodes of the cluster and the message switch can be used to distribute the workload among the multiple instances of the service.”))

Thus, in requiring the port protocol specific function to “select” a destination from a plurality of possible destinations, this function helps to achieve an objective of the invention, namely evenly distributing work among the computer nodes, rather than simply automatically routing the incoming message to a specific node based on the protocol/port pair.

The patentees also made this distinction during the prosecution of the patent. The patentees overcame the prior art by stating that the port protocol specific function must select the destination of incoming messages using either a function or an algorithm rather than by simply replacing the incoming message with a predetermined address pulled from a table. (JX-6 ('852 File History) at IBM00000821-23.) IBM argues that, instead, what the patentees actually distinguished was between whether the entire selection process for the destination is performed “automatically” in the gateway node of the cluster or whether it requires the user's/external host's input. (CIB at 61-62.) However, the prosecution history shows that the patentees distinguished their invention over the prior art by arguing that their invention used either a

[REDACTED]

function or algorithm to determine the destination node of the incoming message . (JX-6 ('852 File History) at IBM00000822 (“The destination node, item 11 of the Office action, is not computed by an algorithm but changed by direct replacement with addresses in a table.”))

IBM argues that the “f\_inconn” routing function discloses an embodiment where the destination is actually selected from a “Cluster Connection Table” of pre-established connections.

(CIB at 60; CRB at 32.) However, the specification describes the f\_inconn function as:

The f\_inconn function finds the source address (s\_addr) 1022 and the source port number (s\_port) 1024 in the incoming message, and compares this pair of values against entries in a Cluster Connection Table 1020. If it finds no matching entry (the normal case), it creates one, and associates with it a node 1026 *according to a load distribution, i.e., balancing, algorithm. (One preferred algorithm is round-robin but any other load balancing algorithm know in the art can be used.)* The message is forwarded to the chosen node where the connection is established by the rlogin daemon running on that node. If there is an existing matching entry in the Cluster Connection Table 1020, the message is forwarded to the associated node. This is likely an error, and the rlogin daemon on the node will generate the appropriate error response.

(JX-5 ('852 Patent) at 19:10-25) (emphasis added). Thus, the f\_inconn function actually selects a destination from a plurality of possible destinations based on a load balancing algorithm and, as such, the ALJ’s claim construction covers this embodiment. In addition to the above referenced embodiment, the specification further describes another embodiment of the f\_inconn function:

Subsequent messages associated with an established connection are also processed by the connection manager, f\_inconn. s\_addr and s\_port are used to find the matching entry in the Cluster Connection Table for the connection, and the messages are forwarded to the node associated with the connection.

(JX-5 ('852 Patent) at 19:26-31.) IBM argues that the ALJ’s claim construction fails to cover this embodiment. However, it is not necessary to cover every single embodiment and a patentee may draft different claims to cover different embodiments. *Intamin, Ltd. v. Magnetar Techs., Corp.*, 483 F.3d 1328, 1337 (Fed. Cir. 2007) (“[T]his court has acknowledged that a claim need not cover all embodiments.”); *see also Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d

[REDACTED]

1316, 1326 (Fed. Cir. 2001) ("We conclude that only those embodiments involving communications established by the host processor meet the functional requirement of the claim."); *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324-25 (Fed. Cir. 2003); *Phillips Petroleum Co. v. Huntsman Polymers Corp.*, 157 F.3d 866, 875 (Fed. Cir. 1998).)

Therefore, based on the foregoing, the ALJ finds that "protocol port specific function which selects a routing destination for the message from a plurality of possible destinations" means that "the protocol port specific function actually selects the routing destination from a plurality of possible destinations."

#### **D. The '829 Patent**

##### **1. "microcomputer"**

Complainant argues that the term "microcomputer," which appears in the preamble of claim 1 of the '829 Patent, means "a computer system that includes at least a combination of a microprocessor, IC memory, and I/O ports." (CIB at 80.) Complainant argues that this definition was first proposed by Respondents' counsel during the deposition of Complainant's expert, Dr. Phinney, and that Dr. Phinney agreed with said definition. (CIB at 80.) Complainant argues that the preamble term is a claim limitation because it provides antecedent basis for the subsequent "whereby" clause in claim 1, which states, "whereby a user of the microcomputer may . . . ." (CIB at 80.) In addition, Complainant argues that the term "microcomputer" in the preamble "does not state a purpose or an intended use of the invention, but rather discloses a fundamental characteristic of the claimed invention that is properly construed as a limitation of the claim itself." (CIB at 81 (citing *Poly-America L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1310 (Fed. Cir. 2004)).) The Staff agrees with Complainant. (SIB at 19-20.)

[REDACTED]

Respondents argue that the term “microcomputer” will not affect the outcome of this case and thus need not be construed or considered a limitation. (RRB at 22; RRX-59C at 71.)

Respondents argue that complaint’s proposed construction omits a power supply. (RRB at 22.) Thus, citing a definition from a book that Complainant’s expert, Dr. Phinney, referred to in the course of forming his opinion, Respondents argue, in the alternative that the ALJ should construe the term to mean “[i]n addition to the CPU, a working microcomputer must include clock signal, program memory, data memory, input port, output port, and power supply.” (RRB at 22 (citing CX-2053C at 14; CX-2425).)

The ALJ agrees with Complainant and the Staff that “microcomputer” is a claim limitation, which discloses a fundamental characteristic of the claimed invention. A review of the ‘829 Patent as a whole reveals that the term “microcomputer” is one that “breathes life and meaning into the claims and, hence, is a necessary limitation to them,” which must be construed “to ascertain its scope and meaning.” *In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994). The Federal Circuit has stated that:

[T]erms appearing in a preamble may be deemed limitations of a claim when they give meaning to the claim and properly define the invention. Although no ‘litmus test’ exists as to what effect should be accorded to words contained in a preamble, *review of a patent in its entirety should be made to determine whether the inventors intended such language to represent an additional structural limitation or mere introductory language.*

*In re Paulsen*, 30 F.3d at 1479 (internal citations omitted) (emphasis added). Though it appears in the preamble of claim 1, the ALJ finds that the term “microcomputer” is not “mere introductory language.” The term, also used later in that claim, is the subject of both asserted claims 1 and 2 of the ‘829 Patent,<sup>3</sup> lending support to the necessity of a construction. *See, e.g.*,

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<sup>3</sup> Claim 2 depends on claim 1 and because “claim terms are normally used consistently throughout the patent,” *Phillips*, 415 F.3d at 1314, the construction of each of the terms at issue in claim 1 applies equally to claim 2.

[REDACTED]

*Pitney Bowes*, 182 F.3d at 1306 (finding that a term appearing in the “whereby” clause could only be understood in the context of the same term in the preamble).

The ALJ does not agree with any party’s construction of the term “microcomputer” and instead finds that it means “a personal computer system unit having a system processor, electrically powered data processing and storage components, a motherboard or system planar to electrically connect the components together, and a power supply.” This construction is supported by the plain language of claim 1 and the specification of the ‘829 Patent. As discussed above, when interpreting claims, it is appropriate to “look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics*, 90 F.3d at 1582.<sup>4</sup>

The ALJ finds that the microcomputer of claim 1<sup>5</sup> must have electrically powered data processing and storage components, as well as a power supply, based on the plain language of the claim. As stated *supra*, the claims themselves “provide substantial guidance as to the meaning of particular claim terms,” *Phillips*, 415 F.3d at 1314, and “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Id.* at 1316.

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<sup>4</sup> The ALJ notes that, during prosecution of the application that led to the ‘829 Patent, the only change that the Examiner required the applicants to make was to formalize the drawings submitted with their application. (*See* JX-4 at IBM00000053-58.) Aside from the issue regarding the informal drawings, the Examiner allowed the claims of the ‘829 Patent without objection. Thus, the intrinsic evidence here consists of only the ‘829 Patent claims and specification.

<sup>5</sup> The ALJ finds that specification of the ‘829 Patent uses the terms “microcomputer,” “personal computer system,” “personal computer,” “computer,” and “microcomputer system” interchangeably. (*See, e.g.*, JX-3 (col. 1, ll. 12-22; col. 1, ll. 48-55; col. 2, ll. 23-25; col. 3, ll.24-26; col. 4, ll. 17-21; col. 4, ll. 60-64; col. 5, ll. 32-33). A similar situation arose in the case *Pickholtz v. Rainbow Technologies, Inc.*, 284 F.3d 1365, 1372-73 (Fed. Cir. 2002), in which the Federal Circuit found that “the proper construction of the term ‘computer’ follows without ambiguity from the intrinsic evidence” and that the patent in suit used the terms “computer” and “computer system” as synonyms. The Court stated that “the patent in this case provides no indication that the two terms mean different things. Instead, the patent uses the term ‘computer system’ in the specification and the term ‘computer’ in the claims; nothing in the patent itself explicates their relationship or indicates any difference in meaning.” *Id.* at 1373. The ALJ finds that such is also true here with respect to the aforementioned terms.

[REDACTED]

Claim 1 explicitly claims a microcomputer comprising 1) electrically powered data processing and storage components<sup>6</sup> and 2) a pulse width modulation switching power supply for supplying electrical power to such components. (JX-3 (col. 6, ll. 47-56). This plain language makes it clear that both the components and the power supply are essential to the microcomputer of claim 1. The ALJ also finds support for the inclusion of a power supply as a specific limitation on the term “microcomputer” in the ‘829 Patent specification. For example, the patent is entitled “Personal Computer Power Supply” and the specification states that the invention “relates to personal computers, and more particularly to personal computer power supplies.” (*Id* at Abstract; *see also Id.* at col. 1, ll. 5-6). The specification also discloses that the “[e]lectrical power for energizing the components of such personal computers is conventionally supplied by power supplies . . .” (*Id* at col. 1, ll. 48-50). These statements indicate to the ALJ that the claimed microcomputer must include a power supply.

However, the microcomputer of the claim is not necessarily limited to these elements alone. The word “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 scope of the claim.” *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997) (emphasis added); Manual of Patent Examining Procedure § 2111.03 “Transitional Phrases” (8th ed., Rev. 5, 2006) (stating, “The transitional term ‘comprising’ . . . is inclusive or open-ended and *does not exclude additional, unrecited elements . . .*” (emphasis added)). Moreover, “[i]n the patent claim context the term ‘comprising’ is well understood to mean ‘including but not limited to.’” *Cias, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007). Thus,

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<sup>6</sup> The ALJ finds that the specific system components identified by the parties, such as memory and input/output ports, fall under the category of “electrically powered data processing and storage components,” a phrase which will be further discussed and construed *infra*.

[REDACTED]

the microcomputer must have electrically powered data processing and storage components and a power supply – but may also include additional elements.

Based on the intrinsic evidence of record, the ALJ finds that the microcomputer of claim 1 is subject to two additional limitations. The microcomputer must include a system processor, which the parties generally do not dispute. (SPFF 61-62, 65; COSPFF 61-62; RRSPPF 65-D). It must also include a motherboard or system planar. The specification states:

One of the distinguishing characteristics of these [personal computer] systems is the use of a *motherboard or system planar to electrically connect these components together.*

(*Id.* at col. 1, ll. 18-21 (emphasis added).) Further:

At least certain of these components are mounted on a *planar* which is mounted on the chassis and *provides a means for electrically interconnecting the components.*

(*Id.* at col. 3, ll. 5-11). Thus, in this situation, the ALJ finds that it is proper to import a limitation from the specification into the construction of the claim because the two preceding passages make it clear that the microcomputer claimed in the '829 Patent could not function without a motherboard and/or system planar. The patent is directed to a power supply for supplying electrical power to components of the computer, components which must be electrically connected in order to operate. The ALJ finds that the objective of the '829 Patent to provide electrical power to the components could not be achieved if said components were not electrically connected, *e.g.*, by a motherboard or system planar.

In view of the above, the ALJ finds that there is no need to resort to extrinsic evidence, such as the testimony of Dr. Phinney, to construe the term “microcomputer.” *See, e.g., Pickholtz*, 284 F.3d at 1373. In *Pickholtz*, the Federal Circuit stated:

Because the meaning of the term ‘computer’ can be resolved from the intrinsic evidence alone, we need not rely on any extrinsic evidence, which in any event is



[REDACTED]

not conclusive. While Pickholtz advanced a number of technical dictionaries defining 'computer' as inclusive of peripherals, as well as expert testimony to the same effect, Rainbow disputed the meaning of those technical dictionaries and offered contrary expert testimony.

*Id.* (internal citations omitted). Here, Complainant and the Respondents dispute whether Dr. Phinney offered an appropriate construction, particularly in light of the definition given in the textbook that Dr. Phinney cited as support for his opinion and Dr. Phinney's interpretation of that definition. The ALJ finds that the meaning of "microcomputer" is clear without relying on either the textbook definition or Dr. Phinney's interpretation of the same.

## **2. "electrically powered data processing and storage components for processing and storing digital data"**

Complainant argues that the term "electrically powered data processing and storage components," a portion of the claim phrase above, means "operating elements of the computer such as those depicted in Figure 3 of the patent, for example, RAM, IO ports, controllers, buffers, coprocessors, microprocessors, etc." (CIB at 81.) Complainant argues that this is the "plain meaning construction." (CIB at 81.) Complainant argues that the plain language of the claim "encompasses *components that process data* and *components that store data*," and that such plain language is supported by the '829 Patent specification, which states that the invention relates to "personal computer power supplies for supplying electrical power to electrically operated components which manipulate *or* store digital data." (CIB at 82, 83; JX-3 at col. 1, ll. 5-8 (emphasis added).) Complainant further argues that its construction "takes into consideration the application context of the invention which is to turn on and off a computer." (CIB at 83.)

Respondents argue that the term "data processing and storage components for processing and storing digital data," a slightly different portion of the claim phrase above, means

[REDACTED]

“components, where each component processes and stores digital data.” (RIB at 33.)

Respondents argue that, because the claim uses an adjective phrase, “data processing and storage,” with the functional language, “for processing and storing digital data,” the claim encompasses only components that *both process and store* digital data, such as a microprocessor or coprocessor. (RIB at 33 (emphasis added).) According to Respondents, a person of ordinary skill in the art would not understand the word “and” here to mean “or.” (RIB at 33-34.)

The Staff argues that “data processing and storage components for processing and storing digital data” means “data processing components for processing data and storage components for storing data.” (SIB at 20.) The Staff argues that, simply because the phrase uses the word “and” instead of “or,” “the term should not be limited to only components that *process and store* digital data as Respondents suggest.” (SIB at 20 (emphasis added).) The Staff agrees with Complainant that the specification uses the phrase “manipulate or store” and thus refers to both components that process digital data and components that store digital data. (SIB at 21.)

The ALJ adopts a modified version of the constructions proposed by Complainant and the Staff, and finds that the claim phrase “electrically powered data processing and storage components for processing and storing digital data” means “electrically powered components, which process and/or store digital data.” This construction is supported by the specification of the ‘829 Patent. For example, the specification states that:

This invention relates to . . . personal computer power supplies for supplying electrical power to *electrically operated components which manipulate or store digital data.*

(JX-3 at col. 1, ll. 5-8 (emphasis added).) The ALJ agrees with Complainant and the Staff that the language “manipulate or store” encompasses components that manipulate, *i.e.*, “process,”

[REDACTED]

digital data and components that store digital data. The ALJ finds that it also encompasses components that are capable of performing both functions.

The specification refers to “components,” “operating components,” and “data processing and storage components” that are electrically connected, powered, and/or operated. The specification often refers to such components collectively and neither identifies particular “data processing components” or “storage components” nor defines a specific purpose or function for any type of component. The ALJ finds that the specification uses the terms “components,” “operating components,” and “data processing and storage components” interchangeably, similar to the ALJ’s finding, *supra*, regarding the terms “computer,” “microcomputer,” etc. *See, e.g., Pichholtz*, 284 F.3d at 1372-73. For example, the specification states:

Personal computer . . . consists of a system unit having *a single system processor and associated volatile and non-volatile memory, a display monitor, a keyboard, one or more diskette drives, a fixed disk storage, and an optional printer*. One of the distinguishing characteristics of these systems is the use of a motherboard or system planar to electrically connect *these components* together.

(JX-3 at col. 1, ll. 12-21 (emphasis added); *see also Id.* at col. 1, ll. 48-50) (stating, “Electrical power for energizing *the components* of such personal computers is conventionally supplied by power supplies . . .”) (emphasis added); col. 1, ll. 60-65 (discussing voltage and current used with “*the operating components*” of a personal computer) (emphasis added); col. 2, ll. 25-30 (stating, “In realizing the object of the present invention, the possibility is opened of establishing remote control over the supply of electrical power to *the operating components* of a computer . . .”) (emphasis added).)

The ALJ finds that the feature that all such components have in common is that they are part of the computer and are electrically powered, operated, and/or connected. Thus, the ALJ finds that the components may consist of, *e.g.*, the system processor, associated volatile and non-

[REDACTED]

volatile memory, display monitor, keyboard, diskette drives, fixed disk storage, and an optional printer as set forth in the specification:

Personal computer systems can usually be defined as a desk top, floor standing, or portable microcomputer that consists of a system unit having a single *system processor and associated volatile and non-volatile memory, a display monitor, a keyboard, one or more diskette drives, a fixed disk storage, and an optional printer.*

(JX-3 at col. 1, ll. 12-18 (emphasis added).) The specification also states:

The computer has a cover formed by a decorative outer member and an inner shield member which cooperate with a chassis in defining an enclosed, shielded volume for receiving *electrically powered data processing and storage components* for processing and storing digital data. At least *certain of these components* are mounted on a planar which is mounted on the chassis and provides a means for electrically interconnecting *the components of the computer including those identified above and such other associated elements as floppy disk drives, various forms of direct access storage devices, accessory cards or boards, and the like.*

(*Id.* at col. 2, ll. 67 – col. 3, ll. 11 (emphasis added) (internal references to figures omitted).)

Thus, the ALJ finds that other associated elements, such as floppy disk drives, various forms of direct access storage devices, accessory cards or boards, and the like may also be electrically powered components of the microcomputer claimed in the '829 Patent.

The ALJ does not, however, construe the specific examples of data processing and storage components identified by the parties or in the '829 Patent to be limitations of claim 1 or 2, for several reasons. First, as discussed *supra*, particular examples and embodiments discussed in the specification should not be read into the claims as limitations. *Markman*, 52 F.3d at 979. Second, the ALJ “need not, and indeed cannot, attempt to precisely define” which data processing and storage components may be part of the “microcomputer” as used in the '829 Patent for all cases. *See Pickholtz*, 284 F.3d at 1374. And, finally, independent claim 10 of the

[REDACTED]

'829 Patent specifically claims a personal computer system comprising a high speed microprocessor, volatile and non-volatile memory, a bus controller, and a memory controller, among other things. (JX-3 at col. 8, ll. 16-68). The presence of these limitations in claim 10 raises the presumption that they are not specific limitations on claim 1. *See Phillips*, 415 F.3d at 1315; *AllVoice Computing*, 504 F.3d at 1247.

The ALJ finds no support in the '829 Patent for limiting data processing and storage components to components that perform both such functions. Respondents argue that the claim refers only to those components that both process *and* store digital data, such as a microprocessor or coprocessor, and that the '829 Patent "distinguishes 'data processing and storage components' from 'other associated elements' such as direct access data storage devices and I/O devices, which do not perform both 'processing and storing digital data.'" (RIB at 34.) However, the ALJ disagrees. In contrast, the ALJ has found that, in addition to "volatile and non-volatile memory, a display monitor, a keyboard, one or more diskette drives, a fixed disk storage, and an optional printer," the specification identifies "floppy disk drives, various forms of direct access storage devices, accessory cards or boards, and the like," as examples of "electrically interconnected" components that the claimed microcomputer may have. (JX-3 at col. 3, ll. 5-11).

**3. "pulse width modulation switching power supply for connection with an alternating current electrical main supply and for supplying direct current electrical power"**

Complainant construes the terms "power supply" and "pulse width modulation switching power supply" from the claim phrase above. Complainant argues that the term "power supply" means "an arrangement of components that provide power to the operating elements<sup>7</sup> of a computer." (CIB at 83.) Complainant argues that the term "pulse width modulation switching

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<sup>7</sup> The ALJ notes that Complainant indicates that "operating elements" are "data processing and storage components." (CIB at 81.)

[REDACTED]

power supply” means “a power supply such as a switching power supply under PWM control.” (CIB at 84.) Complainant further argues that “[a] typical PWM switching power supply in the context of the claim is a fixed frequency switching power supply that modulates the on time of electronic switches in order to regulate its output.” (CIB at 84.)

Respondents argue that “power supply for connection with an alternating current electrical main supply and for supplying direct current electrical power” means “a device in the microcomputer that connects to a high AC voltage and converts the high AC voltage to supply DC voltages.” (RIB at 31.) Respondents argue that such a construction is consistent with the specification of the ‘829 Patent because the power supplies depicted in Figure 2 and Figure 4 (and described in the accompanying text) are located *within* the personal computer. (RIB at 31-32.) Respondents argue that there is a distinction between a power “source” and a power “supply.” (RIB at 31-32.) As an example, Respondents state that, in Figure 2, a power cord “sources” the high AC voltage from the wall outlet to the power supply, and then the power supply “supplies” the DC voltage to the data processing and storage components of the computer. (RIB at 31-32.) Respondents further argue that the power supply must be located within the personal computer for safety reasons, *i.e.*, so it will not expose a user of the computer to high AC voltage. (RIB at 32.)

The Staff states that it generally agrees with Respondents’ proposed construction, but argues that the claim phrase “power supply for connection with an alternating current electrical main supply and for supplying direct current electrical power” means “a device that connects to a high AC voltage and converts the high AC voltage to supply DC voltages.” (SIB at 22.) The Staff does not agree with Respondents’ proposed requirement that the power supply must be located “in the microcomputer.” (SIB at 22.)

[REDACTED]

The ALJ finds that “power supply” means “a device which converts electrical power from an available line voltage and current, *i.e.*, alternating current electrical main supply, to the direct voltage and current required to operate a microcomputer, and which supplies electrical power to electrically powered data processing and storage components of a microcomputer.” (*See Id.* at col. 1, ll. 5-8 and ll. 48-55; col. 4, ll. 60-65.) The ALJ also finds that the term “pulse width modulation switching power supply” is not a novel concept as presented in the ‘829 Patent specification. For example, the specification of the ‘829 Patent states:

*Preferably, and as is generally known and applied in the field of personal computers, the power supply 90 is a pulse width modulation switching power supply for connection with an alternating current electrical main supply and for supplying direct current electrical power to the data processing and storage components for enabling operation thereof.*

(*Id.* at col. 4, ll. 60-65 (emphasis added).) The specification also states:

It has been conventional to control operation of such power supplies by switching the supply voltage to the power supply. In the example given, such switching is accomplished by turning on and off the 110 volt 60 hertz mains [sic] supply current.

(*Id.* at col. 1, ll. 55-60.) And, further, that:

In conventional switching power supplies as described immediately above, control over whether any voltage is delivered to the operating components of the computer is exercised by turning the normal utility voltage supply on and off.

(*Id.* at col. 5, ll. 34-38.) Thus, the ALJ finds that the “pulse width modulation switching power supply,” as the term is used in the prior art, means “a power supply, the operation of which is controlled by switching the supply voltage to the power supply, *i.e.*, the electrical power from an alternating current electrical main supply, on and off.” This type of prior art power supply is thoroughly described in the ‘829 Patent. (*See JX-3* at col. 4, l. 60 – col. 5, l. 43.)

The ALJ finds that “pulse width modulation switching power supply,” as the term is used in the ‘829 Patent, means “a power supply, which has a controllable component and a signal

[REDACTED]

generator circuit, the operation of which is controlled by said controllable component and said signal generator circuit.” This construction is supported by the plain language of claim 1 and the specification of the ‘829 Patent. *See, e.g., Phillips*, 415 F.3d at 1314, 1316.

Claim 1 explicitly claims a pulse width modulation switching power supply comprising 1) a controllable component and 2) a signal generator circuit. (JX-3 at col. 6, ll. 47 – col. 7, ll.5). This plain language makes it clear that both the controllable component and the signal generator circuit are essential to the pulse width modulation switching power supply of claim 1. The ALJ also finds support for such a construction in the specification, which states, “[i]n accordance with this invention, the power supply comprises a controllable component . . . and a signal generator circuit.” (*Id.* at col. 5, ll. 44-55.) However, similar to the ALJ’s finding with respect to the term “microcomputer,” the ALJ finds that the pulse width modulation switching power supply is not necessarily limited to these elements alone. *See, e.g., Cias*, 504 F.3d at 1360; *Genentech*, 112 F.3d at 501; MPEP § 2111.03. Thus, the pulse width modulation switching power supply of claim 1 must have a controllable component and a signal generator circuit – but may also include additional elements.

The ALJ agrees with Complainant and the Staff that Respondents’ proposed construction improperly reads in a limitation from the specification of the patent, *i.e.*, that the power supply must be inside of the microcomputer. (*See CIB* at 83; *SIB* at 22.) The claim expressly requires that the pulse width modulation switching power supply connect to an alternating current electrical main supply and that it supply direct current electrical power to the data processing and storage components. But, the ALJ finds no support for limiting the location of the pulse width modulation switching power supply to the inside of the microcomputer. Although Figures 2 and 4 show said power supply as being inside of the microcomputer, the ALJ will not import this



[REDACTED]

limitation from the specification into the claim. *See, e.g., Markman*, 52 F.3d at 979. The specification indicates that the object of protecting a user against exposure to high voltage can be realized via delivery of a low voltage signal, which may be controlled by the user of the microcomputer with a manually operable or computer logic operable (remote control) switch. (JX-3. at col. 2, ll. 10-30; col. 6, ll. 13-30.) Specifically:

*As will be appreciated, a user of the computer 10 may control the power on power off functions by manipulating the manual switch 100, and thereby use the computer while avoiding exposure to the higher voltages and currents typically supplied through the main electrical supply obtained from a power distribution company or utility.*

(*Id.* at col. 6, ll. 36-42 (emphasis added); *see also* col. 6, ll. 31-35 (noting that the control is on the secondary/output side of the transformer to isolate a user from dangerous voltages.) Thus, the user is not required to touch the pulse width modulation switching power supply itself or the main electrical supply, leaving no compelling reason to import a limitation requiring said power supply to be located within the microcomputer.

**4. “a controllable component for responding to the presence and absence of a low voltage direct current electrical signal by enabling and disabling the supply of electrical power to said data processing and storage components”**

**a) controllable component**

Complainant construes the terms “controllable component” and “low voltage direct current electrical signal” from the claim phrase above. Complainant argues that the term “controllable component” means “a component of a power supply that can be directed to enable or disable power to operating elements of the microcomputer.” (CIB at 85.) Complainant argues that such a construction is consistent with the plain meaning of the term “controllable component” because the specification describes “a controllable component for responding to the

[REDACTED]

presence and absence of a low voltage direct current electrical signal by enabling and disabling the supply of electrical power to the data processing and storage components by controlling the ‘on’ or ‘off’ state of the pulse width modulator . . .” (CIB at 85 (citing JX-3 at col. 5, ll. 45-50).) Complainant argues that such a description means that “when the message to ‘turn on’ the power to the operating elements is asserted, the controllable component responds by doing so.” (CIB at 85.)

Respondents argue that the claim phrase “a controllable component for responding to the presence and absence of a low voltage direct current electrical signal by enabling and disabling the supply of electrical power” means “a PWM switching component that receives and converts the high AC voltage to the DC voltages, and, based on an input that represents the presence and absence of a low voltage DC control signal, enables and disables the supply of the DC voltages.” (RIB at 26.) The Staff agrees with Respondents’ proposed construction. (SIB at 23.)

Respondents argue that “controllable component” is not a term of art that has an ordinary meaning, (RIB at 28; RRB at 16-17), and that their proposed construction “is consistent with the plain language of the claim as a whole.” (RIB at 26.) According to Respondents:

The claim element indicates the ‘power supply’ performs pulse width modulation (PWM), is connected to high AC voltage, and converts that high AC voltage to DC voltages in order to supply DC voltages to the claimed ‘data processing and storage components.’

(RIB at 26; *see also* RRB at 16-17.) Respondents further argue that the controllable component must necessarily perform “PWM” and convert the voltage because the “signal generator circuit” of the power supply “is defined to perform other functionality.” (RIB 26-27.) Respondents and the Staff argue that that the disclosure of a “PWM and Power Converter” in Figure 4 of the ‘829 Patent suggests that the controllable component *is* the PWM and Power Converter, not a component within it. (RIB at 27; SIB at 23.) Respondents rely heavily on the depiction in

[REDACTED]

Figure 4 of the controllable component as a “PWM and Power Converter,” as well as on the statements in the specification of the ‘829 Patent that “the controllable component is a pulse width modulator control circuit” and that the controllable component responds to the presence or absence of a low voltage direct electrical current “by controlling the ‘on’ or ‘off’ state of the pulse width modulator.” (RRB at 17-18.) For example, respondents assert that:

[I]f the controllable component did not receive the always-on high AC voltage from the AC main supply, there would be no voltage to convert to DC voltages to supply to the data processing and storage components to enable their operation.

(RIB at 27-28.) (SEE RPF 1236-72.) The Staff adds that claim 2 of the ‘829 Patent, which claims “a microcomputer according to claim 1 wherein said controllable component comprises a pulse width modulator control circuit,” also suggests that the controllable component “includes a pulse width modulator control circuit and other structure.” (CIB at 24; *see also* RIB at 27; RRB at 19.)

Complainant argues that the Respondents’ and the Staff’s proposed construction, particularly the phrase, “receives and converts the high AC voltage to the DC voltages,” excludes the preferred embodiment of the invention and is thus incorrect. (CIB at 85; CRB at 51.)

Complainant asserts that Respondents’ expert, Dr. Madisetti, admitted that respondents’ construction would not cover the preferred embodiment. (CRB at 51 (citing CFF 7.105).)

Complainant also argues that such a construction improperly imports a limitation into claim 1, *i.e.*, “a pulse width modulator control circuit,” that would render claim 2 superfluous. (CIB at 86.)

The ALJ finds Complainant’s proposed construction to be overly simplistic; while Respondents’ and the Staff’s proposed construction is unnecessarily complicated. The ALJ finds that “a controllable component for responding to the presence and absence of a low voltage

[REDACTED]

direct current electrical signal by enabling and disabling the supply of electrical power” means “a component of the pulse width modulation switching power supply, which, upon receiving a low voltage direct current electrical signal, supplies direct current electrical power to the electrically powered data processing and storage components.” This is consistent both with the ALJ’s construction of the term “pulse width modulation switching power supply,” the plain meaning of the claim, and the specification of the ‘829 Patent. The ALJ finds that, because claim 1 claims a pulse width modulation switching power supply “for supplying direct current electrical power” to the data processing and storage components, (JX-3 at col. 6, ll. 52-56), the electrical power supplied by the controllable component must be direct current electrical power. In addition, the ALJ finds that there is nothing in the patent to limit the controllable component to receiving alternating current from the electrical main supply. Unlike the signal generator circuit, see *infra*, the claim does not specifically state that the controllable component is operatively connected “with an alternating current electrical main supply for controllably deriving” anything, e.g., low voltage direct current, from the main supply.

The ALJ finds that the specification and claims of the ‘829 Patent make it clear that the controllable component of claim 1 does *not* always have to be a “pulse width modulator control circuit.” The specification states, “[i]n the illustrated embodiment [Figure 4], the controllable component is a pulse width modulator control circuit (described generally hereinabove and indicated at 91 in FIG. 4) which may be of conventional form . . .” (JX-3 at col. 5, ll. 60-65.) It also describes the controllable component of Figure 4 as “enabling and disabling the supply of electrical power to the data processing and storage components *by controlling the ‘on’ or ‘off’ state of the pulse width modulator.*” (*Id.* at col. 5, ll. 45-50 (emphasis added). The language, “by controlling the ‘on’ or ‘off’ state of the pulse width modulator,” is conspicuously missing from

[REDACTED]

claim 1, even though it is described in the specification. This indicates to the ALJ that such language was intentionally left out of the claim. Further, the same language appears in claim 2 as a limitation on claim 1. (JX-3 at claim 2 (stating, “A microcomputer according to claim 1 wherein said *controllable component comprises a pulse width modulator control circuit.*” (emphasis added))).) The presence of said limitation in dependent claim 2 raises a presumption that it is not also present in independent claim 1, *Phillips*, 415 F.3d at 1315, particularly here where the only difference between claims 1 and 2 is the limitation in dispute. *SunRace*, 336 F.3d at 1303. Even Dr. Madisetti, Respondents’ expert, admitted that the controllable component of claim 1 “could or could not include the PWM control circuit.” (SEE CFF 7.107.) Thus, the ALJ will not limit the controllable component of claim 1 in such a way that it must necessarily be a pulse width modulator control circuit.

**b) “low voltage direct current electrical signal”**

In its initial brief, Complainant argues that the term “low voltage direct current electrical signal” means “logic level voltage low current electrical signals.” (CIB at 87.)<sup>8</sup> Complainant argues that the switches in the preferred embodiment send logic level signals “in order to enable/disable the controllable component,” (CRB at 52), and that there are two instances in the specification of the ‘829 Patent that indicate the term should be construed as “logic level voltage.” (CIB at 87 (citing JX-3 at col. 2, ll. 23-25 and col. 6, ll. 13-18).) Complainant further argues:

Based on this, along with the ordinary meaning of the word signal (something that conveys information rather than power) and because a signal conveys information, it is generally understood that a signal is both low voltage and low current.

<sup>8</sup> The ALJ notes that, in its findings of fact, complainant expands its construction to “an electrical signal having a *constant* logic level voltage.” (CFF 7.111 (emphasis added).) Complainant argues that “there is either a constant signal or no signal.” (CRB at 52.) Respondents argue that “at least two voltage levels” are required to enable and disable the supply of electrical power to the data processing and storage components. (RIB at 29.) The ALJ finds no support in the ‘829 Patent for a “constant” limitation.

[REDACTED]

(CIB at 87.) According to Complainant, the dictionary on which Respondents' expert, Dr. Madisetti, relies supports complainant's proposed construction. (CIB at 87.)

Respondents do not construe this term and argue that "it simply means what it says." (RRB at 19.) Respondents argue that the specification of the '829 Patent refers to the low voltage direct current signal "as 'a relatively low voltage signal,' a far cry expressly requiring logic level." (RIB at 28.) Respondents further argue that the logic level signals that are referred to in the portions of the specification that Complainant cites "are used to operate the user-controlled switches 100, 101, which permit remote control over the computer." (RRB at 19.) Respondents argue that Complainant has confused these signals with the low voltage direct current signal. (RRB at 19 (citing JX-3 at col. 6, ll. 26-30).)

The Staff does not construe this term.

The ALJ agrees with Respondents that the term "low voltage direct current electrical signal" does not require a construction; rather, it means what it says. The specification exemplifies "available line voltage and current" (also called the "main supply current" and "alternating current electrical main supply") as "the 110 volt 60 hertz current supplied in the United States." (JX-3 at col. 1, ll. 48-60 and col. 5, ll. 38-43.) In contrast, the specification refers to the direct voltages and current required to operate the components of the personal computer as "*significantly lower*," (*Id.* at col. 1, ll. 60-65 (emphasis added)), and sets forth an object of the invention as protection of a personal computer user against exposure to high voltages, which may be accomplished by "the delivery of a *relatively low voltage signal*." (*Id.* at col. 2, ll. 22 (emphasis added).) The specification also notes that use of such "lower level voltage to control the operation of a personal computer power supply" was proposed by the prior art. (JX-3 at col. 1, l. 66 – col. 2, l. 7; *see also* col. 6, ll. 5-25 (describing how high frequency

[REDACTED]

electrical current pulses are “reduced in voltage” and “turned into pure direct current”).) Thus, the ALJ finds that a “low voltage direct current electrical signal” is an electrical signal delivered to the controllable component from the signal generator circuit, which signal is derived from the 110 volt 60 hertz alternating current electrical main supply, and which signal is lower voltage and current than said main supply. The ALJ finds that Complainant’s proposed construction improperly requires the reading of limitations, *i.e.*, “logic level” signal (and/or “constant” signal), from the specification and preferred embodiment of the ‘829 Patent into the term “low voltage direct current electrical signal.” (*See Id.* at col. 2, ll. 25 and col. 6, ll. 10-20).

**5. “a signal generator circuit operatively connected with said controllable component and with an alternating current electrical main supply for controllably deriving from the main supply a low voltage direct current signal for delivery to said controllable component”**

Complainant construes the terms “signal generator circuit” and “operatively connected” from the claim phrase above. Complainant argues that the term “signal generator circuit” means “a circuit that is operatively connected with the AC main supply and generates a signal directed to the controllable component for enabling or disabling power to the operating elements of the microcomputer.” (CIB at 87.) Complainant argues that such a construction is consistent with the specification of the ‘829 Patent, (CIB at 87), stating, “[a]s described in the specification, the *signal generator circuit is powered by, but does not include, a stand-by power supply.*” (CIB at 89 (emphasis added).)

Complainant argues that the term “operatively connected” means “enabling operation when connected,” and that the “plain meaning of this term in the context of the patent specification simply includes connection to an AC main supply such that the signal generator can derive a low voltage direct current signal from the AC main supply.” (CIB at 90.)

Complainant’s expert, Dr. Phinney, testified that a person of ordinary skill in the art would

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understand “‘operatively connected’ in the context of the ‘829 Patent to entail a stand-by power supply connected to the signal generator circuit for converting the AC voltage to DC voltage.” (CIB at 90; CFF 7.167-7.172.) Again, according to Complainant, such a stand-by power supply “is not part of the signal generator circuit.” (CRB at 48-49.)

Respondents argue that the claim phrase “a signal generator circuit operatively connected with said controllable component and with an alternating current electrical main supply for controllably deriving from the main supply a low voltage direct current signal for delivery to said controllable component” means “an analog circuit, operatively connected with both the controllable component and the high AC voltage, that controllably derives from the high AC voltage a low voltage DC control signal and generates the low voltage DC control signal to be delivered to the controllable component.” (RIB at 19.) Respondents argue that the signal is controllably derived through the use of a small transformer. (RIB at 21; RRB at 11.)

Respondents argue that Complainant’s proposed construction improperly allows the low voltage direct current signal to be derived from a DC voltage supply when, according to Respondents, the signal “must be derived from high AC voltage – not DC voltage.” (RIB at 19, 20; RRB at 9-10.) Respondents argue that their construction is consistent with the claim language, specification, and extrinsic evidence. (RIB at 21-23; RRB at 9-13.) The Staff agrees with Respondents’ proposed construction. (SIB at 25-27; SRB at 3-6.)

Complainant argues that there is no support to limit the signal generator circuit to an analog circuit and that, even if there were support for such a limitation in the specification, it would be improper to read it into the claims. (CIB at 88 (citing *Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1373 (Fed. Cir. 2008)).) Complainant also argues that a person of ordinary skill in the art would understand that the signal generator circuit in the preferred



[REDACTED]

embodiment “can receive a signal from the computer-logic operable switch, which is clearly a digital input.” (CIB at 88.) Complainant argues that the Staff’s reasoning that “[f]unctionally, a digital circuit cannot operate off of or controllably derive from AC voltage, but an analog circuit can do so,” would both dictate that the computer be construed to be analog and exclude the preferred embodiment illustrated by Figure 4. (CIB at 89.) According to Complainant’s expert, Dr. Phinney, “the signal generator is a digital circuit because it is ‘performing a digital function on digital inputs, creating a digital output.’” (CIB at 89; CFF 7.133.) Complainant further argues that there is no support in the patent to restrict the “physical arrangement” of the signal generator circuit and the AC main supply. (CIB at 90-91.) Complainant argues that the preferred embodiment describes an arrangement in which the signal generator circuit is connected to the AC main supply via a stand-by power supply, which “powers” the circuit, and that Respondents’ proposed construction thus improperly excludes the preferred embodiment. (CIB at 91; CRB at 48-49.)

The ALJ finds that “a signal generator circuit operatively connected with said controllable component and with an alternating current electrical main supply for controllably deriving from the main supply a low voltage direct current signal for delivery to said controllable component” means “a circuit, which is operatively connected to both the controllable component and the alternating current electrical main supply, and which uses a transformer to controllably derive a low voltage direct current signal from said main supply for delivery to said controllable component.” This construction is supported by the plain language of claim 1 and the specification of the ‘829 Patent.

With respect to the parties’ dispute regarding from where the low voltage direct current signal may be derived, *e.g.*, from alternating current (via a transformer) or from direct current

[REDACTED]

(via a “stand-by power supply”), the ALJ finds that the plain language of the claim is clear: the signal generator circuit derives the low voltage direct current signal from the alternating current electrical main supply. (See JX-3 at col. 6, ll. 64-68; RIB at 19, 21.)<sup>9</sup> The claim specifically states that the circuit is operatively connected “with an alternating current electrical main supply for controllably deriving from the main supply a low voltage direct current signal.” The ALJ finds that there is no support in the ‘829 Patent for a meaning of “deriving,” other than its ordinary meaning, *e.g.*, to obtain or receive from a source. Complainant’s expert, Dr. Phinney, agrees that “deriving” in the context of the claim means that the low voltage direct current signal is derived from the high AC voltage. (SEE RPF 1069.)

The Federal Circuit has construed the term “operatively connected” to mean that “the claimed components must be connected in a way to perform a designated function.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1118 (Fed. Cir. 2004). With respect to this, the parties agree, (CIB at 90-91; RIB at 19-20; SIB at 25-26), and the ALJ will adopt said meaning. The ALJ finds that the “claimed components” here are the signal generator circuit and the alternating current electrical main supply. The ALJ further finds that the “designated function” is to derive a low voltage direct current signal from the alternating current main supply (for delivery to the controllable component). Thus, the signal generator circuit must be connected to the alternating current electrical main supply such that it derives a low voltage direct current signal from the alternating current electrical main supply (for delivery of the signal to the controllable component).

The ALJ finds that a transformer is necessary to operatively connect the signal generator circuit to the alternating current main supply; the signal generator circuit does not receive direct current and voltage from the alternating current main supply. The ALJ further finds that the

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<sup>9</sup> The ALJ finds that there is no support in the ‘829 for an “analog circuit” limitation.

[REDACTED]

specification of the '829 Patent makes it clear that it is a transformer *within* the signal generator circuit that “operatively connects” the circuit to the alternating current electrical main supply in order to derive the low voltage direct current signal from the main supply. The transformer transforms alternating current supplied by the main supply into “rectified current,” which is lower voltage than that of the main supply. For example, with respect to Figure 4, the preferred embodiment, the specification states:

The comparator 92 receives from a first signal circuit a low voltage direct current reference signal established by a voltage divider 94, 95 *supplied with rectified current transformed from the main supply voltage by a suitable small transformer 96.*

(JX-3 at col. 6, ll. 5 (emphasis added).) The specification also states that, in the preferred embodiment, the signal generator circuit comprises a comparator and first and second signal circuits. (*Id.* at col. 5, ll. 65-68.) Thus, in the preferred embodiment, the transformer is included as part of the signal generator circuit.<sup>10</sup>

The ALJ further finds that including a transformer in the construction here is not an improper reading in of a limitation from the patent specification because, in its discussion of the prior art pulse width modulation switching power supplies, the specification’s description of how said prior art supplies function includes the use of a transformer. For example, the specification states:

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<sup>10</sup> The ALJ notes that, when the specification only discloses a single embodiment, *i.e.*, a signal generator circuit that comprises a comparator and first and second signal circuits, it is improper to read such an embodiment into the claims. *Computer Docking Station*, 519 F.3d at 1373 (stating that “this court will not countenance the importation of claim limitations from a few specification statements or figures into the claims”). The ALJ finds that such is particularly true where later claims in the '829 Patent, *e.g.*, dependent claim 3 and independent claim 8, specifically claim a signal generator circuit that comprises “a comparator, a *first signal circuit* for supplying to the comparator a low voltage direct current reference signal, and a controllable *second signal circuit* for controllably supplying to the comparator a low voltage enable/disable signal . . .” (JX-3 at col. 7, ll. 9-18 (emphasis added).) Thus, the ALJ does not construe the signal generator circuit of claim 1 to necessarily include a comparator and first and second signal circuit, because then at least claims 3 and 8 would be superfluous. *See, e.g., AllVoice*, 504 F.3d at 1247; *Phillips*, 415 F.3d at 1315; *SunRace*, 336 F.3d at 1303.

[REDACTED]

[P]ower supplies of the switching type are more efficient and often less expensive than their linear kin. While designs vary, *the typical switching supply* first converts incoming 60 Hz utility power to a much higher frequency of pulses, in the range of 20kHz. . . . *The pulses are reduced in voltage by a transformer* and turned into pure direct current by rectification and filtering.

. . . [*H*]igh frequencies require smaller, less expensive transformers and filtering circuits. Nearly all of today's personal computers use switching power supplies.

(*Id.* at col. 5, ll. 6-33 (emphasis added).) Thus, even in the prior art, a transformer is required in order to reduce voltage and turn high frequency pulses into pure direct current from the incoming 60 Hz utility power, *i.e.*, derive a low voltage direct current electrical signal from the alternating current electrical main supply. Even if the signal generator circuit comprises something other than a comparator and first and second signal circuit, it must still include a transformer.

The ALJ finds nothing to support the idea that a “stand-by power supply” is somehow connected to alternating current main supply and the signal generator circuit or to show that a transformer is a “stand-by power supply.” The term “stand-by power supply” is not used anywhere in the ‘829 Patent; rather, it is a term used by Complainant’s expert, Dr. Phinney, (*see, e.g.*, Phinney, Tr. at 938:22-939:3; CFF 7.130-40s), and the ALJ is not persuaded that it applies to claim 1. The ALJ further finds that, in arguing that the signal generator circuit is operatively connected to the main AC power supply by a stand-by power supply, Complainant has essentially agreed that the circuit is connected to the main supply by a transformer. For example, Complainant states in a parenthetical that CFF 7.168 discloses and illustrates a “*stand-by power supply transformer* located between the signal generator and the AC mains [sic] supply.” (CIB at 91 (emphasis added).) In addition, Complainant specifically argues that:

The *signal generator* depicted in figure 4 ‘controllably derives’ the LVDC from and AC source because it is *powered by a standby power supply, i.e., the transformer 96*, rectifiers and a filter as clearly described in the specification.

[REDACTED]

(CRB at 48 (citing JX-3 at col. 5, l. 65 – col. 6, l. 5) (emphasis added).) Even Complainant’s expert agrees that the low voltage direct current signal is derived from the high AC voltage through the use of a transformer. (Phinney, Tr. at 936:4-7.) The difference is that Complainant would have its transformer (*i.e.*, stand-by power supply) located *between* the signal generator circuit and the alternating current main supply rather than within the signal generator circuit as an integral part of that circuit.

The ALJ does not find persuasive Complainant’s arguments that a stand-by power supply is a separate element of the microcomputer power supply. (*See* CRB at 48-49.) As stated *supra*, the ALJ finds that a transformer is an element of the signal generator circuit. In addition, the ALJ finds that said construction does not exclude the preferred embodiment, in which the comparator, a component of the signal generator circuit, receives from a first signal circuit, an additional component of the signal generator circuit, a “signal established by a voltage divider supplied with rectified current transformed from the main supply voltage by a suitable small transformer.” (JX-3 at col. 5, l. 65 – col. 6, l. 5.)

Finally, the ALJ finds Complainant’s argument that a person of ordinary skill in the art would understand that the signal generator circuit in the preferred embodiment “can receive a signal from the computer-logic operable switch, which is clearly a digital input,” (CIB at 88), to be irrelevant. The main issue here is whether the low voltage direct current signal may be derived from a DC voltage supply, not whether the signal generator circuit should be characterized as an analog circuit or a digital circuit. A signal that the circuit receives from a computer-logic operable switch has no effect on the signal generator circuit’s derivation of a low voltage direct current signal from the alternating current main supply.

**6. “whereby a user of the microcomputer may control energization of the electrically powered data processing and storage components by controlling**

**the application of said low voltage direct current signal from said signal generator circuit to said controllable component”**

Complainant argues that “controlling the application of said low voltage direct current signal,” the latter portion of the claim phrase above, does not require a construction. (CIB at 91.) Complainant alleges that respondents argue that this term should be limited to “directly causing the delivery or non-delivery of the low voltage DC control signal,” (CIB at 91; CRB at 49-50), and further argues that doing so would be improper. (CIB at 91-92.)

Respondents argue that the parties agree that the claim phrase “whereby a user of the microcomputer may control energization of the electrically powered data processing and storage components by controlling the application of said low voltage direct current signal from said signal generator circuit to said controllable component,” should be given its ordinary meaning, (RIB at 29); however, Respondents fail to explain what such ordinary meaning may be.

Respondents allege that the parties disagree on whether the signal generator must control energization of *all* data processing and storage components, and on whether an AC power switch can satisfy the energization limitation. (RIB at 29-31; RRB at 20.) Complainant characterizes these alleged disagreements as “strawman arguments” constructed by Respondents. (CRB at 50.)

The Staff does not construe this claim phrase.

The ALJ finds that “whereby a user of the microcomputer may control energization of the electrically powered data processing and storage components by controlling the application of said low voltage direct current signal from said signal generator circuit to said controllable component” means what it says, *i.e.*, “the user of the microcomputer may control the supply of direct current electrical power to the electrically powered data processing and storage components by controlling the delivery of the low voltage direct current signal from the signal generator circuit to the controllable component.” The ALJ finds that this is the plain meaning of

[REDACTED]

said claim phrase, as well as an objective of the invention. The ALJ finds no support for inserting the language “directly causing” into the construction of the claim and that the parties’ further alleged disagreements are more appropriately dealt with in the infringement section regarding the ‘829 Patent.

#### **E. The ‘741 Patent**

##### **1. “A method of cooling a computer having a plurality of components and at least one variable rate a fan cooling unit”**

The parties dispute whether the preamble of independent claim 1, “[a] method of cooling a computer having a plurality of components and at least one variable rate a fan cooling unit,” is a claim limitation. IBM argues that there is no basis to construe the preamble as a limitation of claim 1. (CIB at 25.) More particularly, IBM argues that ASUS has failed to establish that any of the preamble breathes life into the claim to justify departing from the notion that preambles do not normally limit claims. (*Id.*) ASUS and the Staff argue that construing the preamble as a limitation is the only proper way to adequately describe the invention disclosed and claimed in the ‘741 Patent. (RIB at 57; SIB at 34.) Specifically, ASUS and the Staff argue that the claim terms “said components,” “the rate,” “and “said cooling units” can only be understood in the context of the preamble. (RIB at 58; SIB at 34.) ASUS and the Staff also note that the specification of the ‘741 Patent describes the invention as relating to “computer system cooling and more particularly to automatic speed control of fans for cooling a computer system.” (*Id.*)

“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.” *Seachange Int’l, Inc. v. C-Cor, Inc.*, 413 F.3d 1361, 1375-76 (Fed. Cir. 2005) (quoting *Catilina Mktg. Int’l v. Coolsavings.com, Inc.*, 289 F.3d 801, 807-08 (Fed. Cir. 2002).) The preamble of claim 1 of the ‘741 Patent

[REDACTED]

describes the claimed method as a method for cooling a computer. (JX-1 ('741 Patent) at 5:51.) The preamble further describes the computer as having a “plurality of components” and “at least one variable rate [] fan cooling unit.” (*Id.* at 5:51-53.) The body of claim 1 outlines the minimum steps necessary to practice the method. The steps involve obtaining a predetermined cooling requirement for at least one of “said components” and varying “the rate” of at least one of “said cooling units” based on the obtained cooling requirements. (*Id.* at 5:54-57.) The preamble provides the only antecedent basis and thus the context essential to understand the meaning of the claim terms “components”, “rate”, and “cooling unit.” Further, the specification repeatedly states that the invention: (1) “relates to computer system cooling and more particularly to automatic speed control of fans used for cooling a computer system;” (2) “includes a method of cooling a computer having a plurality of components and at least one variable rate cooling unit;” and (3) “includes an apparatus for cooling a computer having a plurality of components, the apparatus including at least one variable rate cooling unit.” (*Id.* at 1:5-9, 1:64-66, 2:2-5 (emphasis added).) Thus, the ALJ finds that the preamble, including the term “computer,” limits the scope of the claimed invention. *See NTP, Inc. v. Research In Motion, Ltd.*, 392 F.3d 1336, 1358-59 (Fed. Cir. 2004).

## **2. “obtaining a predetermined cooling requirement”**

The parties do not address the limitation “obtaining a predetermined cooling requirement” as a whole, but rather separately dispute the terms “obtaining” and “predetermined cooling requirement.” However, as IBM’s expert Dr. Polish correctly notes, “obtaining” and “predetermined cooling requirement” go hand-in-hand. (*See* Polish, Tr. at 363:16-19 (“You are obtaining something which was predetermined. So they are of a piece. They go together.”).) Additionally, ASUS’ and the Staff’s prosecution history estoppel and disclaimer arguments



[REDACTED]

relating to the terms “obtaining” and “predetermined cooling requirement” derive from the same statements in the prosecution history. Accordingly, the terms “obtaining” and “predetermined cooling requirement” will be addressed together.

IBM argues that the terms “obtaining” and “predetermined cooling requirement” should be construed in accordance with their plain and ordinary meaning as “loading or retrieving previously determined information to meet a cooling level output.” (CIB at 21.) In support, IBM argues that the patent specification describes an example of obtaining a predetermined cooling requirement from a thermal table stored in memory to be used to determine the speed of the fan. ((*Id.*)) According to IBM, the term “obtaining” as used in this example refers to loading or retrieving the cooling requirement from the thermal table. ((*Id.*)) IBM also argues with regard to the term “predetermined” that the specification describes the cooling requirements as previously stored as speed values for each bay of a computer and for each relevant component. Additionally, IBM notes that the specification describes the cooling requirement as “predetermined” when a manufacturer and/or user has previously determined the cooling requirement and stored it prior to the obtaining step of the claim.

ASUS argues that properly construed the limitation “obtaining” means “acquiring or getting, in any way.” (RIB at 64.) ASUS asserts that this construction is consistent with the term’s plain and ordinary meaning. ((*Id.*)) Additionally, ASUS argues that the phrase “predetermined cooling requirement” should be construed as “a cooling requirement that is determined in advance and not in real time.” ((*Id.*) at 58.) That is, according to ASUS, a cooling requirement that is determined in advance and not one based on the current operating state of any of the components. (*Id.*)

[REDACTED]

In contrast with IBM's claim construction argument, ASUS argues that the limitation "predetermined cooling requirement" does not have a plain and ordinary meaning within the context of the '741 Patent. (*Id.* at 58-59.) ASUS argues that the specification and prosecution history clearly indicate that the inventors expressly limited the scope of the limitation. (*Id.* at 59.) In particular, ASUS argues that the specification teaches that the "predetermined cooling requirement" for each component is determined before operation of the claimed cooling system. (*Id.*) ASUS also argues that the specification discloses that the fan speed for the computer system is determined at computer boot and does not change during system operation, regardless of the current temperature or operating state of individual components. (*Id.* at 60.) ASUS notes that the specification discloses that if an unknown component is inserted into an I/O slot, a default predetermined cooling requirement must be assigned during system boot or the user must specify a speed value before the speed of the fan will be varied. (*Id.*) ASUS argues that there would be no need for a default or user specified fan speed value if the cooling requirement for a component could be determined in real time based on changes in the temperature or operational state of a component. (*Id.*)

Additionally, ASUS argues that by denigrating the use of temperature sensors to vary the speed of a fan and criticizing the method of varying the speed of a fan based upon the amount of current drawn from the computer power supply, the patent applicants disclaimed the use of a "predetermined cooling requirement" for a component in conjunction with a real-time cooling requirement for a component, such as information on the current temperature, speed or amount of electrical current drawn by a component. (*Id.* at 60-61.) Further, ASUS argues that the patent applicants, in overcoming a rejection of claim 1 based on the Takahashi and Suzuki references, added the limitation "predetermined" and thus clearly and unmistakably differentiated between

[REDACTED]

“sensing the current temperature of the desired area to be cooled” and “using a predetermined cooling requirement” to vary the speed of a fan.

The Staff argues that the term “obtaining” should be construed to mean “acquiring or getting without a temperature sensor.” (SIB at 37.) The Staff argues that its proposed construction of the term “obtaining” is correct because it is broad enough to encompass the steps of “querying” and “using” that are explicitly recited in dependant claim 2 of the ‘741 Patent, but narrow enough to exclude the use of temperature sensors that the patent applicant disclaimed during patent prosecution. (*Id.*) With regard to the phrase “predetermined cooling requirement,” the Staff argues that properly construed the phrase means “an amount of cooling to meet a demand that is determined in advance of current operation and that is not dependent on the current operating state.” (*Id.* at 39.) The Staff argues that its construction is consistent with the language of the claims, the specification and the prosecution history.

In particular, the Staff argues that the specification discloses that the fans used in the claimed computer system are set to a speed to provide an amount of cooling. (*Id.*) The Staff also notes that the specification discloses that “often fans are preset to a predetermined speed at the factory to provide a fixed amount of cooling.” (*Id.* at 40.) Additionally, the Staff argues that its proposed construction is supported by the disclosure in the specification of the use of a thermal table containing cooling requirements that are stored in memory or on a hard disk. (*Id.*) Also, the Staff argues that Figure 3 of the ‘741 Patent teaches that if the configuration of the computer does not change, then the predetermined speed values stored in the thermal table are used again. In such a case, the Staff notes that the fan speed will not change even though the current operating states of the components may change. (*Id.* at 41.) Further, the Staff argues that there is no disclosure in the specification of any embodiment of the invention that uses a

[REDACTED]

temperature sensor to determine the temperatures or current operating states of components in the computer system and that the specification explicitly denigrates the use of temperature sensors and other variable speed fan systems that depend on the current operating state of components inside the computer. (*Id.*) The Staff also asserts that the prosecution history supports its proposed claim construction, arguing that the patent applicants disclaimed the use of temperature sensors in distinguishing their invention over the prior art. (*Id.* at 42-43.)

It is clear from the language of claim 1 of the '741 Patent that in the limitation "obtaining a predetermined cooling requirement" the term "predetermined" modifies the phrase "cooling requirement." Dependent claim 2 also elucidates the proper construction of the limitation "obtaining a predetermined cooling requirement." In particular, dependent claim 2 requires that the obtaining step of claim 1 comprises the steps of "querying said components for component identifiers" and using said identifiers to obtain cooling requirements." Because dependent claims are generally narrower in scope than the independent claims on which they depend, the term "obtaining" in claim 1 should generally be construed broad enough to encompass the specific steps of "querying" and "using" in claim 2. *See Glaxo Group Ltd. v. Ranbaxy Pharmaceuticals, Inc.*, 262 F.3d 1333, 1336 (Fed. Cir. 2001) ("Dependent claims are generally narrower in scope than the claims from which they depend."). IBM's proposed construction of the term "obtaining" as "loading or retrieving" is too narrow in scope to encompass the steps of "querying" and "using" and thus is disfavored. Additionally, IBM's proposed construction relies on statements in the specification describing the preferred embodiment of the invention. Because it is generally impermissible to limit the scope of a claim to a preferred embodiment and to read limitations from the specification into the claims, IBM's proposed construction is also disfavored for these reasons. *See, e.g., Varco, L.P. v. PasonSys. USA Corp.*, 436 F.3d 1368,

[REDACTED]

1373 (Fed. Cir. 2006); *RF Delaware, Inc. v. Pacific Keystone Techs., Inc.*, 326 F.3d 1255, 1263 (Fed. Cir. 2003).

The phrase “obtaining a predetermined cooling requirement” is not used in the specification. However, the specification does state that “computer systems often utilize one or more fans to provide cooling of the electronic equipment” and that “often these fans are preset to a predetermined speed at the factory to provide a fixed amount of cooling.”<sup>11</sup> (JX-1 (‘741 Patent) at 1:19-23.) Because we assume the same words are used consistently throughout the patent, the applicant’s use of the word “predetermined” in the above sentence can aid in the proper construction of the limitation “obtaining a predetermined cooling requirement.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc) (“claim terms are normally used consistently throughout the patent.”). Here, the word “predetermined” is used in its commonly understood form to describe something, a speed value in this instance, that was decided beforehand. Temporally, the word is used in the above quoted sentence to refer to a speed value that was decided prior to the completed manufacture of the electronic equipment. Thus, the applicant’s use of the word “predetermined” in the above sentence supports the Staff’s and ASUS’s proposed constructions that limit the predetermined cooling requirement to cooling requirements that are not based on the present operating state of the components being cooled.

The specification’s description of the process for obtaining a cooling requirement is also relevant in construing the present limitation. *See Phillips*, 415 at 1315 (“[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.”)(internal quotations omitted). In particular, the specification describes a process whereby when a computer is booted the initial program load

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<sup>11</sup> It is not surprising that the limitation “obtaining a predetermined cooling requirement” is not explicitly used in the written description because the term “predetermined” was added to claim 1 during the prosecution of the patent.

[REDACTED]

read only storage (“IPLROS”) queries the computer’s I/O slots to determine what option cards are present in the computer. (JX-1 (‘741 Patent) at 3:58-4:10.) After determining what option cards are present, NVRAM is queried to determine if a previous computer configuration is stored in memory. (*Id.* at 4:12-14.) If a previous configuration is stored in memory then that previous configuration is compared with the current configuration. (*Id.* at 4:61-65.) If the previous computer configuration is the same as the current computer configuration then the specification teaches that the previously determined speed values for the computer fans are used again. (*Id.* at 4:67-5:2.) If the previous configuration differs from the current configuration or if a previous configuration does not exist, then the specification teaches that a thermal table is queried to determine the base cooling requirements for each computer bay and each of the components therein. (*Id.* at 4:19-22.) Based on the values stored in the thermal table, a speed value for each fan in the computer is determined. (*Id.* at 4:46-51.) Figure 4 of the ‘741 Patent illustrates cooling requirements in the form of speed values that are contained in a thermal table. (*See Id.* Figure 4.) As described above, the specification teaches that the cooling requirements for the computer fans are determined based on the types and locations of the components installed in the computer, irrespective of the current operating state of the components. In fact, IBM’s expert Dr. Polish conceded that the speed values in the thermal table do not account for how components in the computer are actually being used. (Polish, Tr. at 539:23-540:3, 1596:7-12.)

As previously discussed, the specification discloses that the fan speed is determined when the computer is booted because “option cards are generally moved, added or removed while the system is turned off.” (JX-1 (‘741 Patent) at 4:3-5.) According to the specification, when the thermal table is queried to determine the cooling requirements for each of the components installed in the computer, if there is no corresponding entry in the thermal table for an option

[REDACTED]

card installed in the computer, then the IPLROS will designate a default value or allow the user to specify a fan speed for the unknown option card. (*See (Id.)* at 4:40-43 (“if there is no corresponding entry in the thermal table for an option card then the IPLROS will designate a default value, preferable full speed, for the unknown option card”).) Because there would be no need to set a default or user-specified fan speed value if the cooling requirement for a component could be determined based on the current operating state of the component, the above passage from the specification reinforces that the cooling requirement is not based on the current operating state of the component, but rather varied only based on the presence or absence of the component.

Turning to the prosecution history, it is noted that in an Office Action dated October 30, 1992, the patent examiner rejected claims 1, 6 and 11 under 35 U.S.C. § 102 (b) as anticipated by Japanese Application No. 64-77079 to Takahashi. (*See JX-2* (“741 File History) at IBM00000159-160.) The patent examiner also rejected claims 1, 6, and 11 under 35 U.S.C. § 103 as obvious in view of Takahashi and Japanese Patent Application No. 56-196360 to Suzuki. (*Id.*) The Takahashi and Suzuki references disclose cooling systems that use temperature sensors to obtain the cooling requirements of the components to be cooled and then vary, based on the temperature readings from the temperature sensors, the amount of cooling directed to the components to achieve a desired cooling level. (*See JX-2* (“741 File History) at IBM00000162-165, IBM00000183-186.)

In response to the examiner’s rejection, the patent applicants amended the original language of claim 1 to add the word “predetermined” so that amended claim 1 read in pertinent part “obtaining a predetermined cooling requirement for at least one of said components.” (*Id.*)

[REDACTED]

at IBM00000192-193.) The applicants explained the significance of the amendment in their response stating:

It is respectively submitted that neither Takahashi nor Suzuki teaches or suggests "obtaining a predetermined cooling requirement for at least one of the components." Takahashi and Suzuki teach sensing the current temperature of the desired area to be cooled. However, the claimed invention is directed to using a predetermined cooling requirement.

(JX-2 ('741 File History) at IBM00000200.) In the above quoted passage, the applicants explicitly contrast the predetermined cooling requirement of the claimed invention with the approach taken by Takahashi and Suzuki in which a cooling requirement is obtained by sensing the current temperature of the desired area to be cooled. Thus, based on the narrowing amendment of claim 1 and the applicants' comments in response to the examiner's rejections, the ALJ finds that the patent applicants clearly and unambiguously distinguished the "predetermined cooling requirement" of claim 1 from that which is disclosed by Takahashi and Suzuki.

Accordingly, the Administrative Law Judge finds that one of ordinary skill in the art at the time of the invention would understand from the prosecution history that the limitation "obtaining a predetermined cooling requirement" does not include a cooling requirement based on the current temperature of the component to be cooled. See *Arlington Industries, Inc. v. Bridgeport Fittings, Inc.*, 345 F.3d 1318, 1328 -1329 (Fed. Cir. 2003) ("An amendment or argument made in the course of prosecution may also serve as a disclaimer of a particular interpretation of a claim term."); see also *Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1304 (Fed. Cir. 1997) ("[S]ince, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover, he is by implication surrendering such protection."); *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995) ("The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during



[REDACTED]

prosecution.... Claims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.”).

The patent applicants also stated in response to the patent examiner’s § 102 and § 103 rejections in the October 30, 1992 Office Action that “the claimed invention does not require the use of a temperature sensor, which may be inaccurate or may degrade over time, to vary the cooling requirements.” (JX-2 (‘741 File History) at IBM00000200.) Although IBM argues to the contrary, the above quoted language clearly and unambiguously states that the claimed invention does not require the use of a temperature sensor. Thus, based on the applicants’ own chosen words, a product that relies on the use of a temperature sensor to vary the cooling requirements is not the claimed invention. This conclusion is further supported by the specification, which states in describing the various types of prior art variable speed fan systems, that:

One common approach is to utilize a thermistor within the fan hardware to detect changing temperature inside the computer and then vary the fan speed accordingly. . . . The difficulty with using a thermistor is that the location of the thermistor may impact the accuracy of the temperature reading, the thermistor will detect a temperature rise some period of time after the temperature has already risen, and thermistors tend to degrade in performance over time.

(JX-1 (‘741 Patent) at 1:33-44.) Thus, based on the applicants’ statements in the specification denigrating the use of thermistors in cooling systems and the applicants’ statement in the prosecution history that the present invention does not require the use of temperature sensors, the ALJ finds that the patent applicants disclaimed any method or apparatus that relies on a temperature sensor to vary the cooling requirements. *See Arlington Industries, Inc.*, 345 F.3d at 1328 -1329; *Honeywell Intern., Inc. v. ITT Industries, Inc.*, 452 F.3d 1312, 1319-20 (Fed. Cir. 2006)

[REDACTED]

Accordingly, based on the reasons expressed above, the ALJ finds that one of ordinary skill in the art at the time of the invention would have construed the limitation “obtaining a predetermined cooling requirement for at least one of said components” as “getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired by a temperature sensor.”

### 3. “components”

IBM and the Staff argue that the limitation “components” should be construed in accordance with its plain and ordinary meaning as “electric devices that may be included in a computer.” (CIB at 24; SIB at 44.) ASUS also asserts that the term “components” should be given its plain and ordinary meaning. (RIB at 65.) However, ASUS argues that properly construed the limitation “components” means “a constituent part.” (*Id.*)

The plain language of claim 1 indicates that the term “components” refers to components that are found in a computer. (JX-1 (‘741 Patent) at 5:51-52 (“a computer having a plurality of components”).) Unasserted independent claims 11 and 12 provide additional information about the limitation, indicating that “components” include such things as a main processor and memory. (*See Id.* at 6:43-44, 54-55; *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (“Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.”)). Because the plain language of the claims describes “components” with some particularity as something that is found in a computer and because the examples of components listed in unasserted claims 11 and 12 reinforce this fact, the plain language of the claims tend to support IBM and the Staff’s more particularized construction over ASUS’s rather broad construction.

[REDACTED]

The specification of the '741 Patent also supports IBM and the Staff's proposed construction of "components" as "electric devices that may be included in a computer." Notably, the specification describes the invention as being directed to overcoming the problems created in computer systems by the heat produced by the equipment inside the computer. (*See* JX-1 ('741 Patent) at 1:10-15.) Under the description of the best mode for carrying out the invention, the specification states, after describing the various constituent parts of a computer and the various types of options cards that can be utilized therein, that "[c]ooling is generally required for all electronic devices included in the computer box." (*Id.* at 3:20-21.) Additionally, the specification describes a "component" as a device that can be inserted into an I/O slot, such as a graphics adapter. (*Id.* at 3:35-36 ("I/O slot 160A with graphic adapter 200 and any component inserted into I/O slot 160B").) Further, with reference to Figure 2, the specification describes "components" as including such electric devices as main processor 110, main memory 120, NVRAM 300, ROM 310, graphics adapter 200, registers 320 and 325, D/A converter 330, power supply 340, modem 250 and hard disk 255. (*See id.* at 3:23-39.)

Accordingly, based on the specification and plain language of the claims as described above, the ALJ finds ASUS's proposed construction overly broad and that one of ordinary skill in the art at the time of the invention would construe the limitation "components" as "electric devices that may be included in a computer."

#### 4. "varying the rate"

IBM argues that the limitation "varying the rate" should be construed as meaning "controlling the output of a cooling unit between levels." (CIB at 24.) ASUS argues that properly construed the term means "changing" or "determining and setting." (RIB at 65.) The Staff argues that "varying the rate" means "controlling the speed." (SIB at 44.)

[REDACTED]

The plain language of claim 1 indicates that the “rate” being varied is the rate of the fan cooling unit. (JX-1 (‘741 Patent) at 5:56.) According to the claim language, the fan cooling unit is the device used to cool the computer system and thus the term “rate” as used to describe the fan cooling unit must refer to the “speed” of the fan cooling unit. Such an interpretation conforms with the commonly understood, widely accepted meaning of the word “rate.”

Dependent claim 3, which depends from claim 1, further describes the step of “varying the rate” in claim 1 as including the steps of: (1) determining the cooling requirements for the components; and (2) setting the rate of the cooling units. (*Id.* at 5:64-6:2.) Thus, pursuant the doctrine of claim differentiation, the limitation “varying the rate” in claim 1 should not be construed as limited to the steps of determining and setting, else dependent claim 3 would be rendered superfluous. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (“the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”). In light of dependent claim 3, ASUS’s proposed construction is disfavored. Similarly, there is nothing in the claim language to suggest that the term “rate” should be equated to the word “levels” as suggested by IBM.

The specification supports the Staff’s proposed construction of the limitation “varying the rate” as meaning “controlling the speed.” Specifically, the specification states that the invention relates to “computer system cooling and more particularly to automatic speed control of fans used for cooling a computer system.” (JX-1 (‘741 Patent) at 1:6-8) (emphasis added).

Additionally, in discussing the prior art, the specification describes the various prior art approaches to varying fan speed to control the temperature of computer components and the drawbacks of such approaches, thus reinforcing the notion that “rate” refers to the speed of the

[REDACTED]

fan cooling units. (*See id.* at 1:10-24-61.) Further, in describing the best mode of the invention, the specification states that:

[e]ach fan's speed is varied based upon the power provided to the fan by the power supply. That is, the speed of fan 1 is controlled by the voltage on power line 350A and the speed of fan 2 is controlled by the voltage on power line 350B. . . . The power supply then provides the designated amount of voltage to each of the respective fans thereby controlling the amount of cooling performed by that fan.

(*Id.* at 3:40-57 (emphasis added); *see also id.* at 4:58-60 (“This analog value is then provided to the power supply for each fan thereby setting the speed of that fan.”) (emphasis added).)

Accordingly, based on the specification and plain language of the claims as discussed above, the ALJ finds that one of ordinary skill in the art at the time of the invention would construe the limitation “varying the rate” to mean “controlling the speed.”

## V. INFRINGEMENT DETERMINATION

### A. Applicable Law

In a Section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *Certain Flooring Products*, Inv. No. 337-TA-443, Commission Notice of Final Determination of No Violation of Section 337, 2002 WL 448690 at 59, (March 22, 2002); *Enercon GmbH v. Int'l Trade Comm'n*, 151 F.3d 1376 (Fed. Cir. 1998).

Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly. *Amhil Enters., Ltd. v. Wawa, Inc.*,

[REDACTED]

81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed. Cir. 1995).

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. The Supreme Court has described the essential inquiry of the doctrine of equivalents analysis in terms of whether the accused product or process contains elements identical or equivalent to each claimed element of the patented invention.

*Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997).

Under the doctrine of equivalents, infringement may be found if the accused product or process performs substantially the same function in substantially the same way to obtain substantially the same result. *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1043 (Fed. Cir. 1993). The doctrine of equivalents does not allow claim limitations to be ignored. Evidence must be presented on a limitation-by-limitation basis, and not for the invention as a whole.

*Warner-Jenkinson*, 520 U.S. at 29; *Hughes Aircraft Co. v. U.S.*, 86 F.3d 1566 (Fed. Cir. 1996).

Thus, if an element is missing or not satisfied, infringement cannot be found under the doctrine of equivalents as a matter of law. *See, e.g., Wright Medical*, 122 F.3d 1440, 1444 (Fed. Cir. 1997); *Dolly, Inc. v. Spalding & Evenflo Cos., Inc.*, 16 F.3d 394, 398 (Fed. Cir. 1994); *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538-39 (Fed. Cir. 1991); *Becton Dickinson and Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 798 (Fed. Cir. 1990).

The concept of equivalency cannot embrace a structure that is specifically excluded from the scope of the claims. *Athletic Alternatives v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996). In applying the doctrine of equivalents, the Commission must be informed by the fundamental principle that a patent's claims define the limits of its protection. *See Charles*

[REDACTED]

*Greiner & Co. v. Mari-Med. Mfg., Inc.*, 92 F.2d 1031, 1036 (Fed. Cir. 1992). As the Supreme Court has affirmed:

Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.

*Warner-Jenkinson*, 520 U.S. at 29.

Prosecution history estoppel may bar the patentee from asserting equivalents if the scope of the claims has been narrowed by amendment during prosecution. A narrowing amendment may occur when either a preexisting claim limitation is narrowed by amendment, or a new claim limitation is added by amendment. These decisions make no distinction between the narrowing of a preexisting limitation and the addition of a new limitation. Either amendment will give rise to a presumptive estoppel if made for a reason related to patentability. *Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1139-41 (Fed. Cir. 2004), *cert. denied*, 545 U.S. 1127 (2005)(citing *Warner-Jenkinson*, 520 U.S. at 22, 33-34; and *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733-34, 741 (2002)). The presumption of estoppel may be rebutted if the patentee can demonstrate that: (1) the alleged equivalent would have been unforeseeable at the time the narrowing amendment was made; (2) the rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent at issue; or (3) there was some other reason suggesting that the patentee could not reasonably have been expected to have described the alleged equivalent. *Honeywell*, 370 F.3d at 1140 (citing, *inter alia*, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359 (Fed. Cir. 2003)(*en banc*)). “Generalized testimony as to the overall similarity between the claims and the accused infringer’s product or process will not suffice [to prove infringement under the doctrine of

[REDACTED]

equivalents].” *Tex. Instruments, Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567 (Fed. Cir. 1996).

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). 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*) (citations omitted);

*See also Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1312

(Fed. Cir. 2005) (“In order to succeed on a claim inducement, the patentee must show, first that

there has been direct infringement, and second, that the alleged infringer knowingly induced

infringement and possessed specific intent to encourage another’s infringement.”). Mere

knowledge of possible infringement by others does not amount to inducement. Specific intent

and action to induce infringement must be proven. *Warner-Lambert Co. v. Apotex Corp.*, 316

F.3d 1348, 1363 (Fed. Cir. 2003). In *DSU*, the Federal Circuit clarified the intent requirement

necessary to prove inducement. As the court recently explained:

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-, 2008 WL 4553140 (Fed. Cir.,

2008) (citation omitted). “Proof of inducing infringement requires the establishment of a high



[REDACTED]

level of specific intent.” *Lucent Techs. Inc. v. Gateway, Inc.*, 2007 WL 925510, at \*2-3 (S.D. Cal. 2007)

Under 35 U.S.C. § 271(c), “[w]hoever 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 specifically made to or specially adapted for use in the infringement of the patent, and not a staple article or commodity suitable for substantial non-infringing use, shall be liable as a contributory infringer.”

A seller of a component of an infringing product can also be held liable for contributory infringement if: (1) there is an act of direct infringement by another person; (2) the accused contributory infringer knows its component is included in a combination that is both patented and infringing; and (3) there are no substantial non-infringing uses for the accused component, *i.e.*, the component is not a staple article of commerce. *Carborundum Co. v. Molten Equip. Innovations, Inc.*, 72 F.3d 872, 876 (Fed. Cir. 1995).

To prove direct infringement, IBM must prove by a preponderance of the evidence that the accused products either literally infringe or infringe under the doctrine of equivalents the method of asserted claims of the ‘852, ‘829 and ‘741 Patents. *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d 1329, 1336 (Fed. Cir. 2001). Notably, method claims are only infringed when the claimed process is performed. *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1311 (Fed. Cir. 2006).

[REDACTED]

**B. The '852 Patent**

IBM has accused three (3) basic categories of ASUS accused routers that infringe the '852 patent. These groups are: (1) 19 Virtual Server type Routers, (2) the WL-566gM Router, and (3) the SL-500 and SL-1000 Routers (collectively "the Accused Routers"). (CX-2052C at p.1-2, Q 164-165; CDX-6.)

**1. Claim 1 and 8**

IBM has accused ASUS of infringement of independent claims 1 and 8 and dependent claims 13, 14, 22 and 23 of the '852 Patent by the importation, the sale for importation or the sale after importation of the Accused Routers in the United States.

**a) Literal Infringement**

IBM asserts that should the ALJ choose to adopt its claim construction, the Accused Routers meet each and every limitation of the asserted claims and, as such, literally infringe the '852 Patent. (CIB at 63-74.) IBM provides no analysis of the Accused Routers under ASUS's claim construction. (*See generally* CIB at 63-75; CRB at 32-37.)

However, as set forth *supra* in Section IV.C, the ALJ has adopted ASUS's claim construction and the parties generally agree that should the ALJ adopts ASUS's claim construction, then the Accused Routers do not infringe. (CIB at 63-75 ("This case therefore boils down to only the construction of the three claim terms discussed above. If the ALJ agrees with IBM's construction of these claims, IBM should prevail in this Investigation for the '852 Patent."); RIB at 109-113; SIB at 61-63.) IBM has failed to show the Accused Routers meet each and every limitation of claim 1 and claim 8 and, therefore, the Accused Routers do not literally infringe the '852 Patent.

[REDACTED]

(1) "Routing incoming messages across a boundary of a cluster of computer nodes" and

"gateway node within the cluster of computer nodes"

Under the ALJ's claim construction, the Accused Routers fail to meet the "cluster of computer nodes" and "gateway node within the cluster of computer nodes." The ALJ construed these claim terms to require, *inter alia*, that the "cluster of computer nodes share common resources and cooperate in doing work" and that "a computer (not just a device) that serves as the gateway that is within the cluster of (one of the) computer nodes," respectively. The evidence shows that the Accused Routers fail to meet this limitation because [REDACTED] [REDACTED] as required by the claims. (RRX-58C (Olivier Rebuttal), Q 213, 243; CX-1802C.) Rather, the Accused Routers [REDACTED] [REDACTED]. (RRX-58C at Q240.) The Accused Routers [REDACTED] [REDACTED] (*Id.* at Q 242-43.)

Therefore, the ALJ finds that the Accused Routers fail to share work, tasks and/or processes as required and, therefore, fail to meet these limitations of claim 1.

**(2) matching both the software communication protocol port number and the software communication protocol number to an entry in a message switch memory, the matched software communication protocol port number entry being associated with a software communication protocol port specific function which selects a routing destination for the message from a plurality of possible destinations**

The Accused Routers also do not practice the "protocol port specific function" limitation. As set forth above, the claim requires that the function actually select the routing destination from a plurality of possible destinations. The evidence shows that the Accused Routers, however,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (RRX-58C Q 265-266.) The Accused Routers [REDACTED]

[REDACTED] (*Id.*) For example, the

[REDACTED] in the Accused Routers, identified by IBM's expert Dr. Francis as practicing this

limitation, [REDACTED]. Rather, [REDACTED]

[REDACTED]

[REDACTED] (*Id.* at Q268-269.) [REDACTED]

[REDACTED]

[REDACTED] (*Id.* at Q270.)

The [REDACTED] in the Accused Routers also fails to practice this limitation

because [REDACTED]

[REDACTED] (*Id.* at Q274.)

The evidence fails to show how this process actually selects a routing destination for the message

from a plurality of possible destinations. (*Id.* at Q276-277.) Similarly, the [REDACTED] is

incapable of selecting a routing destination from a plurality of possible destinations because it

[REDACTED]

(RRX-58C at Q280; CX-1788C.) [REDACTED]

[REDACTED]

[REDACTED] (RRX-58C at Q281.) The evidence shows that the [REDACTED]

[REDACTED] as set forth *supra* with the other functions of the

Accused Routers. (RRX-58C at Q286-89.)

[REDACTED]

Therefore, the ALJ finds that the evidence shows that the Accused Routers do not actually select a destination from a plurality of possible destinations and, therefore, fail to meet this limitation of claim 1.

**(3) reading a software communication protocol number in a message header of the message to recognize an incoming message as a software communication protocol port type message**

Finally, the Accused Routers fail to practice the limitation of claim 1 of “reading a software communication protocol number in a message header of the message to recognize an incoming message as a software communication protocol port type message.” The ALJ construed this claim to require the discrete step of recognizing the incoming message as a software communication protocol port type message or as a non-software communication protocol port type message (in addition to reading the software communication protocol number in the message header). While the Accused Routers [REDACTED]

[REDACTED]

[REDACTED]. (RRX-58C Q 244-45.) Instead, the Accused Routers [REDACTED] [REDACTED] (RRX-

58C at Q245.) The evidence shows that the code relied upon by IBM actually shows that it [REDACTED]

[REDACTED]. (RRX-58C at Q251; CX-1788C at ASUS\_SC027543.)

Therefore, the ALJ finds that the Accused Routers do not recognize the incoming message as a software communication protocol port type message or as a non-software communication protocol port type message and, therefore, fail to meet this claim limitation of claim 1.

[REDACTED]

As set forth *supra*, under the ALJ's claim construction, the Accused Routers fail to these limitations of claim 1 and, therefore, the Accused Routers do not literally infringe the '852 Patent.

The parties have treated claim construction for claim 8 as "almost identical to that of claim 1." (CIB at 73; RPF 8006-8010; SIB at 62.) As such, since the Accused Routers do not practice certain limitations in claim 1, *e.g.* "routing incoming messages across a boundary of a cluster of computer nodes;" "a gateway node within the cluster of computer nodes;" "reading a software communication protocol number in a message header of the message to recognize an incoming message as a software communication protocol port type message;" and "protocol port specific function which selects a routing destination for the message from a plurality of possible destinations", they similarly fail to practice certain limitations of claim 8, *e.g.* "routing incoming messages across a boundary of a cluster of computer nodes;" "a gateway within the cluster of computer nodes;" "reading a software communication protocol number in an IP message header to recognize an incoming message as a software communication protocol port type message;" and "port specific function which selects a routing destination for the message from a plurality of possible destinations." Therefore, the Accused Routers do not literally infringe claim 8 of the '852 Patent.

**b) The Doctrine of Equivalents**

IBM argues that the Accused Routers also infringe under the doctrine of equivalents and that any asserted difference is insubstantial as the Accused Routers are equivalent in structure, function, and operation to the invention in the asserted claims of the '852 Patent and perform substantially the same function, in substantially the same way to achieve substantially the same results. (CIB at 74.) ASUS and Staff argue that IBM has failed to meet its burden and, instead,

[REDACTED]

its expert has only provided conclusory statements without a full analysis. (RPFF 8997; SIB at 62.)

The ALJ finds that IBM has failed to meet its burden of proving infringement under the doctrine of equivalents. The analysis performed by IBM's expert, Dr. Francis is cursory at best and, instead, relies only upon conclusory statements. (See CX2052C (Francis Direct) Q 664-66.)<sup>12</sup> *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997) (holding that "[t]he determination of equivalence should be applied as an objective inquiry on an element-by-element basis").

### c) Induced Infringement

IBM argues that ASUS induces infringement of the '852 Patent because each of the Accused Routers is sold with user manuals and instructions that provide instructions on how to operate the products and encourage ASUS's customers to infringe the '852 Patent. (CIB at 74-75.) IBM further argues that since ASUS has failed to design around the '852 Patent, despite knowing of its existence, and have not produced any exculpatory opinion of counsel, there is at least an adverse inference that they intended to cause infringement. (CIB at 75.)

ASUS argues that IBM has failed to show that its products directly infringe the '852 Patent and, therefore, fail to show that ASUS has induced infringement. (RIB at 113.) ASUS further argues that the Accused Routers have other modes and uses that IBM does not accuse of

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<sup>12</sup> For example, Dr. Francis's testimony on infringement of the Accused Routers under the Doctrine of Equivalents is limited to the following analysis:

It is my opinion that ASUS' 22 Accused Products literally meet each and every limitation of the asserted '852 patent claims. Any difference that ASUS may asserts exists between its Accused Products and the asserted claims would be insubstantial as each ASUS Accused Product is equivalent in structure, function and operation to the inventions of the asserted '852 patent claims and performs substantially the same function, in substantially the same way to achieve substantially the same results the claimed inventions of the '852 patent.

(CX-2052C (Francis Direct) at Q 666.)

[REDACTED]

infringement and that the Accused Routers require other components to infringe under IBM's constructions. (RIB at 113-114.) ASUS further argues that IBM has failed to show that ASUS intends for its customers to infringe the '852 Patent. (RIB at 114.) Staff agrees. (SRB at 18.)

The ALJ finds that ASUS has not induced infringement of the '852 Patent. The ALJ has found that the Accused Routers do not directly infringe the asserted claims of the '852 Patent either literally or under the doctrine of equivalents. Therefore, as a matter of law, ASUS cannot induce infringement without a finding of direct infringement. *See Broadcom Corp. v. Qualcomm, Inc.*, 543 F.3d 683, 697 (Fed. Cir. 2008) ("In order to prevail on an inducement claim, the patentee must establish 'first that there has been direct infringement, and second that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement.'" (citing *ACCO Brands, Inc. v. ABA Locks Mfr. Co.*, 501 F.3d 1307, 1312 (Fed. Cir. 2007) (quoting *Minn. Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1304-05 (Fed. Cir. 2002); *see also Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004) ("Indirect infringement, whether inducement to infringe or contributory infringement, can only arise in the presence of direct infringement.")).

Nevertheless, even if IBM had met its burden of proving direct infringement, the ALJ finds that IBM has failed to meet its burden of proving that ASUS "knowingly induced infringement" or that ASUS possessed the requisite specific intent to induce another to infringe. IBM argues that since it laid out its assertion of infringement of the '852 Patent to ASUS and ASUS failed to design around the '852 Patent and failed to provide an exculpatory opinion of counsel, then those factors are sufficient for the ALJ to make an adverse inference that ASUS intended to cause infringement. (*See* CPFF 6.640-6.643.) However, the ALJ finds that those



[REDACTED]

actions alone are insufficient to warrant an adverse inference of specific intent to induce infringement of the '852 Patent.

**d) Conclusion**

As set forth *supra*, under the ALJ's claim construction, the Accused Routers fail to meet certain limitations of claims 1 and 8 and, therefore, do not literally infringe these claims of the '852 Patent. The ALJ further finds that IBM has failed to meet its burden of proving infringement under the doctrine of equivalents. Finally, since the ALJ found that the Accused Routers do not directly infringe the '852 Patent, the ALJ finds that ASUS has not induced infringement of the '852 Patent.

**2. Claims 13, 14, 22 and 23**

Claims 13 and 22 depend on independent claim 8 and claims 14 and 23 depend on claims 13 and 22, respectively. Inasmuch as each claim limitation must be present in an accused device in order for infringement to be found (either literally or under the doctrine of equivalents), a device cannot infringe a dependent claim if it does not practice every limitation of the independent claim from which it depends. See *Warner-Jenkinson Co.*, 520 U.S. at 40; *Monsanto Co. v. Syngenta Seeds, Inc.*, 503 F.3d 1352, 1359 (Fed. Cir. 2007). Furthermore, the Federal Circuit explained that:

One may infringe an independent claim and not infringe a claim dependent on that claim. The reverse is not true. One who does not infringe an independent claim cannot infringe a claim dependent on (and thus containing all the limitations of) that claim.

*Wahpeton Canvas Co., Inc. v. Frontier, Inc.*, 870 F.2d 1546, 1552 (Fed.Cir.1989).

[REDACTED]

As noted above, the Accused Routers do not infringe claim 8 either literally or under the doctrine of equivalents. (*Supra* V.B.1) Therefore, since the Accused Routers do not infringe independent claim 8, they cannot infringe dependent claims 13, 14, 22 and 23.

### **C. The '829 Patent**

IBM has accused four (4) basic categories of ASUS products that infringe the '829 Patent. These groups are: (1) ASUS Notebook products, (2) ASUS Eee PC products, (3) ASUS Barebones products and (4) ASUS Server Products. (CX2053C at Q 49-50,122; CDX-6.) The Eee PCs and the Notebooks are laptop style computers for portable use, while the Barebones and Server products are desktop or rack-mount computers that are not designed for portable use. (CX2053C at Q122; CDX-6.) In each category of accused products, IBM has designated a "representative" product, namely the ASUS Notebook Models A3H and A8M, the ASUS Eee PC Model 700 (also called Eee PC 2G\_Surf), the ASUS Barebones PC Model V2-PH2, the ASUS Server Models RS120-E3 and KFN4-D16/SAS. (CX2053C at Q146; 242; 302; 411.)

The ALJ finds that none of ASUS's accused products infringes independent claim 1 or dependent claim 2 of the '829 Patent because no such product meets each and every limitation of claim 1.

#### **1. Claim 1**

##### **a) Literal Infringement**

##### **(1) "microcomputer"**

As set forth in Section IV.D, *supra*, the ALJ construed this claim term to mean "a personal computer system unit having a system processor, electrically powered data processing and storage components, a motherboard or system planar to electrically connect the components together, and a power supply." In order to infringe claim 1 of the '829 Patent, an accused

[REDACTED]

product must contain each of the foregoing elements. Here, the evidence shows that the ASUS Eee PCs and ASUS Notebooks meet this claim limitation. (CX-2053C at Q248, 310; CX-87; CX-539C; CX-1086C; CX-1348.) However, the evidence shows that the ASUS Servers and Barebones PCs do not meet this claim limitation unless they are “fully assembled.”<sup>13</sup> (CX-2053C at Q 153, 419; CX-1500C at ASUS\_SCS0014792; CX-1502; CX-1506C; CX-1604.) The evidence further shows that the ASUS serverboards do not meet this claim limitation because they do not have a power supply. (RRX-59C at Q 184, 202; Phinney, Tr. 715:15-716:21.)

**(2) “pulse width modulation switching power supply for connection with an alternating current electrical main supply and for supplying direct current electrical power”**

As set forth in Section IV.D, *supra*, the ALJ found that the term “pulse width modulation switching power supply” is not a novel concept as presented in the ‘829 Patent specification and also found that, in the prior art context, the term means “a power supply, the operation of which is controlled by switching the supply voltage to the power supply, *i.e.*, the electrical power from an alternating current electrical main supply, on and off.” The ALJ then construed the term “pulse width modulation switching power supply,” as the term is used in the ‘829 Patent, to mean “a power supply, which has a controllable component and a signal generator circuit, the operation of which is controlled by said controllable component and said signal generator circuit.” Based on the ALJ’s constructions the term “power supply,” “pulse width modulation switching power supply,” as used in the ‘829 Patent, essentially means “a device which converts electrical power from an available line voltage and current, *i.e.*, alternating current electrical main supply, to the direct voltage and current required to operate a microcomputer, which

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<sup>13</sup> IBM accuses ASUS of contributing to the infringement of the ‘829 Patent through the sale of its Barebones PCs and Servers. This will be dealt with *infra* in the discussion on induced and contributory infringement.

[REDACTED]

supplies electrical power to electrically powered data processing and storage components of a microcomputer, which has a controllable component and a signal generator circuit, and the operation of which is controlled by said controllable component and said signal generator circuit.”

The plain language makes it clear that, in order to infringe, an accused product must have a power supply that contains both a controllable component and a signal generator circuit in order to meet the pulse width modulation switching power supply limitation of claim 1, and that said power supply must convert alternating current from the electrical main supply to the direct current required to operate the microcomputer.

The ALJ finds that none of ASUS’s accused products meet the pulse width modulation switching power supply limitation of the claim because the power supplies identified by IBM’s expert, Dr. Phinney, [REDACTED], as required by the claim. (RRX-59C at Q 145, 160, 179.) Specifically, the ALJ finds that the evidence shows that ASUS’s Accused EeePC, Accused Notebook, and Accused Barebones products have [REDACTED]. Instead, [REDACTED]. [REDACTED]. (RRX 59C at Q145, 160, 179.) In addition, it is unclear to the ALJ, based on the evidence presented, whether any of the accused products contains both a controllable component and a signal generator circuit. IBM’s argument that an external AC adapter and “power supply components” that are located within the computer “together are the PWM switching power supply,” (CIB at 94, 100), is not well-taken. Thus, the ALJ finds that these accused products fail to meet this claim limitation.

[REDACTED]

As found above, the ASUS Accused serverboards do not have a power supply. (RRX-59C at Q 184, 202; Phinney, Tr. 715:15-716:21.) Therefore, the ALJ finds that it is impossible for these products to meet this claim limitation.

**(3) “a controllable component for responding to the presence and absence of a low voltage direct current electrical signal by enabling and disabling the supply of electrical power to said data processing and storage components”**

As set forth in Section IV.D, *supra*, the ALJ construed the controllable component limitation to mean “a component of the pulse width modulation switching power supply, which, upon receiving a low voltage direct current electrical signal, supplies direct current electrical power to the electrically powered data processing and storage components.” The ALJ found that there is nothing in the ‘829 Patent to limit the controllable component to receiving alternating current from the electrical main supply. Thus, in order to infringe this limitation of claim 1, an accused product must contain a controllable component that is a component of the power supply of claim 1. Said controllable component may receive either alternating current and voltage or direct current and voltage.

As set forth in Section IV.D, *supra*, the ALJ also found that the low voltage direct current signal is “an electrical signal delivered to the controllable component from the signal generator circuit, which signal is derived from the 110 volt 60 hertz alternating current electrical main supply, and which signal is lower voltage and current than said main supply.” Thus, in order to infringe this limitation of claim 1, an accused product must contain a controllable component that is a component of the power supply of claim 1 and it must receive a signal from the signal generator circuit that is lower voltage and current than that of the alternating current main supply. In addition, upon receiving said signal, said controllable component must supply direct current electrical power to the electrically powered data processing and storage components.

[REDACTED]

ASUS argues that its Accused Eee PC and Accused Notebook products do not infringe because [REDACTED]

[REDACTED] (RIB at 38.) ASUS also argues that its Accused Barebones and Accused Server products do not infringe because [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (RIB at 38.)

The ALJ finds that the components alleged by IBM to be the “controllable component” in the Accused Eee PC and Accused Notebook products [REDACTED].

Specifically, IBM identified the DC/DC converter in said accused products as the “controllable component” and the evidence shows that the DC/DC converters [REDACTED] [REDACTED].

(RRX-59C at Q145, 152, 155, 171, 174; RX-500 at 50; RX-502C at 41.) Because the controllable component of claim 1 of the ‘829 Patent may receive either alternating current and voltage or direct current and voltage, this characteristic of the alleged controllable components does not prevent them from infringing the controllable component limitation of the claim.

However, it is unclear to the ALJ, based on the evidence presented, whether any of the alleged controllable components is actually a component of a power supply of an accused product that meets the power supply limitation of the claim. Nor is it clear whether any of the alleged controllable components receives a signal from the signal generator circuit. Therefore, these products do not meet this claim limitation.

The ALJ also finds that the components alleged by IBM to be the “controllable component” in the Accused Barebones and Accused Server products [REDACTED]

[REDACTED]

[REDACTED]. (RRX-59C at Q145, 152, 155, 171, 174, 190, 208-209.) Specifically, IBM identified the ATX power supply in said accused products as the

“controllable component,” which allegedly [REDACTED]

[REDACTED] (RRX-59C at Q190, 191; 208; 209; RX-504 at 2.) The evidence shows that the ATX power supply [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]. (RRX-59C at Q191; 209; RX-504 at 2.) This characteristic of the alleged controllable components does not necessarily prevent them from infringing the controllable component limitation of the claim – as construed, the controllable component must supply direct current electrical power to the electrically powered data processing and storage components. It is questionable whether the presence of a DC/DC converter between the direct current being supplied by the controllable component and the data processing and storage components bears on infringement. However, the ALJ need not decide that question because, again, it is unclear to the ALJ, based on the evidence presented, whether any of the alleged controllable components is actually a component of a power supply of an accused product that meets the power supply limitation of the claim. Nor is it clear whether any of the alleged controllable components receives a signal from the signal generator circuit. Therefore, these products do not meet this claim limitation.

**(4) “a signal generator circuit operatively connected with said controllable component and with an alternating current electrical main supply for controllably deriving from the main supply a low voltage direct current signal for delivery to said controllable component”**

As set forth in Section IV.D, *supra*, the ALJ construed the signal generator circuit limitation to mean “a circuit, which is operatively connected to both the controllable component

[REDACTED]

and the alternating current electrical main supply, and which uses a transformer to controllably derive a low voltage direct current signal from said main supply for delivery to said controllable component.” The ALJ further found the plain language of the claim is clear with respect to this limitation, meaning that the signal generator circuit derives a low voltage direct current signal from the alternating current electrical main supply; the signal generator circuit does not receive direct current and voltage from the alternating current main supply.

The ALJ finds that none of ASUS’s accused products meet this claim limitation because the circuit identified by IBM’s expert, Dr. Phinney, as the “signal generator” receives direct current voltages and not alternating current voltage, as required by the claim. (RRX-59C at Q145, 147-48, 66-67, 185-86, 203-04.) Specifically, for the Accused Eee PC and Accused Notebook products, Dr. Phinney identified [REDACTED]

[REDACTED] as the “signal generator circuit.” This circuit receives various direct current voltages from a direct current power supply, not alternating current voltages from the alternating main supply. (RRX-59C at Q147-148 (stating, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (emphasis in original)); RRX-59C at Q166-67; RX-269; RX-502 at 17; RX-500 at 14.) The power supplies of these products receive direct current voltage from an AC adapter, not alternating current from the main supply. Therefore, these products do not meet this claim limitation because they do not controllably derive a low voltage direct current signal from said AC main supply.



[REDACTED]

For the Accused Barebones and Accused Server products, Dr. Phinney identified [REDACTED] [REDACTED] as the “signal generator circuit,” which also receives various direct current voltages from a direct current power supply, not alternating current voltages from the alternating current main supply. (RRX-59C at Q185-186 (stating,

[REDACTED] [REDACTED] (emphasis in original)); RRX-59C at Q203-204; RX-504 at 2.) For the same reasons set forth for the Eee PC and Accused Notebook products, these products also do not meet this claim limitation because they do not controllably derive a low voltage direct current signal from said AC main supply.

**b) Doctrine of Equivalents**

IBM argues that the accused products also infringe under the doctrine of equivalents and that any asserted difference is insubstantial because the accused products are equivalent in structure, function, and operation to the invention in the asserted claims of the ‘829 Patent and because they perform substantially the same function, in substantially the same way, to achieve substantially the same results. (CIB at 114-116.) ASUS and the Staff argue that IBM has failed to meet its burden because IBM’s expert, Dr. Phinney, provided only conclusory statements without a full analysis. (RIB-40-41; SIB at 29.)

The ALJ finds that IBM has failed to meet its burden of proving infringement under the doctrine of equivalents. The analysis performed by Dr. Phinney is cursory at best and relies upon conclusory statements. (See CX2053C (Phinney Direct) Q 232; 300; 410; 509.) Dr. Phinney failed to offer a complete analysis of how each accused product performs the same function as the invention of claim 1 of the ‘829 Patent, in substantially the same way, to achieve

[REDACTED]

substantially the same results. *Warner-Jenkinson Co.*, 520 U.S. at 40 (holding that “[t]he determination of equivalence should be applied as an objective inquiry on an element-by-element basis.”) In particular, Dr. Phinney and IBM fail to address whether a signal generator circuit that receives direct current voltages from a direct current power supply is equivalent to a signal generator that receives alternating current voltages from an alternating current main supply. Therefore, the ALJ finds that the accused products do not infringe the asserted claims of the ‘829 Patent under the doctrine of equivalents.

**c) Induced and Contributory Infringement**

IBM argues that ASUS induces infringement of the ‘829 Patent because ASUS’s Accused Barebones and Accused Server products are sold with user manuals that provide instructions on how to install CPU and memory components and that allegedly encourage ASUS’s customers to infringe the ‘829 Patent. (CIB at 116.) IBM further argues that ASUS knew of the existence of the ‘829 Patent, yet did nothing to change any of its products. (CIB at 116.)

In addition, IBM asserts that ASUS contributes to infringement of the ‘829 Patent through the sale of its Accused Barebones and Accuser Server products. (CIB at 117.) IBM argues that the Accused Barebones and Server products are a material part of a finished microcomputer, are made for use in a finished microcomputer, and have no non-infringing uses. (CIB at 117-118.)

ASUS argues that IBM has failed to show that ASUS’s products directly infringe the ‘829 Patent; therefore, IBM has also failed to show that ASUS induce infringement of the ‘829 Patent. (RIB at 42.) ASUS argues that the Accused Barebones and Accused Server products can be used in a non-infringing manner. (RIB at 42.) ASUS further argues that IBM has failed to

[REDACTED]

show that ASUS intends for its customers to infringe the '829 Patent. (RIB at 43.) The Staff agrees with ASUS. (SRB at 7.)

The ALJ finds that ASUS has not induced or contributed to the infringement of the '829 Patent. Regarding the ASUS Servers and Barebones PCs, the ALJ finds that IBM has failed to meet its burden of showing that, even if these products are "fully assembled", then they meet all the requirements of a "microcomputer" as construed by the ALJ. Furthermore, even assuming that the fully assembled ASUS Servers and Barebones PCs met the microcomputer limitation, as detailed *supra*, these products fail to meet other limitations of claim 1.

The ALJ has found, *supra*, that none of ASUS's accused products directly infringe the asserted claims of the '829 Patent either literally or under the doctrine of equivalents. As a matter of law, ASUS cannot be found to induce or contribute to the infringement of the '829 Patent without a finding of direct infringement. *See Broadcom Corp.*, 543 F.3d at 697 (stating, "In order to prevail on an inducement claim, the patentee must establish 'first that there has been direct infringement, and second that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement.'"); *see also Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed.Cir.2004) ("Indirect infringement, whether inducement to infringe or contributory infringement, can only arise in the presence of direct infringement.").

**d) Conclusion**

As set forth *supra*, the ALJ finds that ASUS's Accused Eee PCs, Accused Notebooks, Accused Barebones, and Accused Server products each fail to meet certain limitations of claim 1 of the '829 Patent and, therefore, do not literally infringe this claim. The ALJ further finds that IBM has failed to meet its burden of proving infringement under the doctrine of equivalents.

[REDACTED]

Finally, because the accused products do not directly infringe the '829 Patent, the ALJ finds that ASUS has not induced infringement or contributed to the infringement of the '829 Patent.

## **2. Claim 2**

Claim 2 depends on independent claim 1. As noted above, the accused products do not infringe claim 1 either literally or under the doctrine of equivalents. (*Supra* V.C.1.) Therefore, since the accused products do not infringe independent claim 1, they cannot infringe dependent claim 2. See *Warner-Jenkinson Co.*, 520 U.S. at 40; *Monsanto Co.*, 503 F.3d at 1359.

### **D. The '741 Patent**

IBM accuses ASUS' notebook computers, servers, barebones computers, motherboards and graphic cards of infringing claim 1 of the '741 Patent. (See CX-2054 (Polish Wit. Stat.) at ¶¶ 45-48; see also CDX-6; CDX-175; CDX-175A.) IBM accuses more than 1000 products of infringement. (*Id.* at ¶ 44.) Because IBM accuses such a large number of products of infringement, IBM's expert Dr. Polish grouped the accused products for purposes of analyzing infringement according to their common characteristics into the following categories: (1) Eee PCs; (2) Notebooks; (3) VGA graphic cards; (4) motherboards; (5) Barebones; and (6) Servers. (*Id.* at ¶¶ 43-44.) IBM bears the burden of proof of infringement and, thus, it makes the most sense to address IBM's infringement arguments in the same manner as IBM's expert Dr. Polish. Accordingly, IBM's infringement contentions will be analyzed based on the above six categories of accused products.

### **1. Claim 1**

#### **a) Literal Infringement**

##### **(1) Eee PCs**

[REDACTED]

IBM accuses ASUS's Eee PCs of literally infringing claim 1 of the '741 Patent. (CIB at 27.) To prove literal infringement, IBM must show that an Eee PC practices each of the steps of the claimed method. *See Franks Casing Crew & Rental Tools, Inc. v. Weatherford Int'l, Inc.*, 389 F.3d 1370, 1378 (Fed.Cir.2004) ("Literal infringement requires that each and every limitation set forth in a claim appear in an accused product.") (internal citation omitted). In addition, because the preamble of claim 1 has been construed as a limitation, IBM must show that the accused products practice the method of claim 1 to cool a computer having a plurality of components and at least one variable rate fan cooling unit. (*Id.*)

An Eee PC is a notebook computer containing multiple components, including, but not limited to a CPU, motherboard, power supply, hard drive and variable rate cooling fan. (CX-2054C (Polish Wit. Stat.) at ¶ 118.) Each Eee PC also includes a basic input output system (BIOS) and ASUS proprietary fan control source code that contains fan control functionality.

(*Id.*) The undisputed evidence of record shows that an Eee PC uses a temperature sensor [REDACTED] [REDACTED] to vary the rate of the fan. (*See* RRX-060C (Stevenson Reb. Wit. Stat.) at ¶¶ 119, 143, 145; CX-2054 (Polish Wit. Stat.) at ¶ 157.) The evidence also undisputedly shows that [REDACTED]

[REDACTED]. (RRX-060C (Stevenson Reb. Wit. Stat.) at ¶ 143; CX-2054 (Polish Wit. Stat.) at ¶ 157 [REDACTED]

[REDACTED] IBM's expert Dr. Polish admitted at the hearing that in order to implement the cooling system in the accused Eee PCs the temperature sensor is required. Specifically, Dr. Polish testified:

Q. Let's move on to predetermined cooling requirement. So we have established this already, but the accused products in this case, the accused products, you can agree that in all of the accused products, the temperature sensor is required to vary the speed of the fan. Correct?

[REDACTED]

A. The way the code is written in the ASUS products, yes.

Q. If you didn't have the temperature sensor, then the cooling system wouldn't work?

A. Right, the code that's on the ASUS products all require temperature sensors in order to function . . . With the one exception of the VGA cards that can do it based upon operating mode.

(Polish Tr. at 404:2-17.)

The limitation "obtaining a predetermined cooling requirement" of claim 1 of the '741 Patent has been construed herein to mean "getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor." (*Supra* at IV.E.) However, as discussed above, the evidence of record shows that a temperature sensor is required in order to determine the cooling level used to vary the fan in ASUS' accused Eee PCs. Additionally, the evidence shows that the cooling level in an Eee PC is based on the current temperature of the component being cooled. Accordingly, the ALJ finds that ASUS' accused Eee PCs do not practice the "obtaining a predetermined cooling requirement" step of claim 1 of the '741 Patent. Thus, the ALJ finds that ASUS' accused Eee PCs do not literally infringe claim 1 of the '741 Patent.

## (2) Notebooks

IBM accuses ASUS Notebook computers of literally infringing claim 1 of the '741 Patent. (CIB at 29.) To prove literal infringement, IBM must show that a notebook computer practices each of the steps of the claimed method. *Franks Casing Crew & Rental Tools, Inc.*, 389 F.3d at 1378. In addition, because the preamble of claim 1 has been construed as a limitation, IBM must

[REDACTED]

show that the accused products practice the method of claim 1 to cool a computer having a plurality of components and at least one variable rate fan cooling unit. (*Id.*)

The ASUS Notebook computers are portable computers containing multiple components, including, but not limited to a CPU, motherboard, power supply, hard drive and variable rate cooling fan. (CX-2054C (Polish Wit. Stat.) at ¶ 194.) Each notebook also includes a BIOS and ASUS proprietary fan control source code that contains fan control functionality. (*Id.*) The undisputed evidence of record shows that the ASUS Notebook computers use a temperature sensor [REDACTED] to vary the rate of the fan. (*See* RRX-060C (Stevenson Reb. Wit. Stat.) at ¶¶ 119, 178-180; CX-2054 (Polish Wit. Stat.) at ¶¶ 225, 248, 269.) The evidence also shows that the required fan speed is based on [REDACTED] [REDACTED]. (RRX-060C (Stevenson Reb. Wit. Stat.) at ¶¶ 178-180; CRRPFF 5752.09, 5752.15.) IBM's expert Dr. Polish admitted at the hearing that in order to implement the cooling system in the ASUS Notebook computers the temperature sensor is required.

Specifically, Dr. Polish testified:

Q. Let's move on to predetermined cooling requirement. So we have established this already, but the accused products in this case, the accused products, you can agree that in all of the accused products, the temperature sensor is required to vary the speed of the fan. Correct?

A. The way the code is written in the ASUS products, yes.

Q. If you didn't have the temperature sensor, then the cooling system wouldn't work?

A. Right, the code that's on the ASUS products all require temperature sensors in order to function . . . With the one exception of the VGA cards that can do it based upon operating mode.

(Polish Tr. at 404:2-17.)

[REDACTED]

The limitation “obtaining a predetermined cooling requirement” of claim 1 of the ‘741 Patent has been construed herein to mean “getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor.” (*Supra* at IV.E.) However, as discussed above, the evidence of record shows that a temperature sensor is required in order to determine the cooling level used to vary the fan in the ASUS Notebook computers. Additionally, the evidence shows that the cooling level in each of the ASUS Notebook computers is based on the current temperature of the component being cooled. Accordingly, the ALJ finds that the accused ASUS Notebook computers do not practice the “obtaining a predetermined cooling requirement” step of claim 1 of the ‘741 Patent. Thus, the ALJ finds that the ASUS Notebook computers do not literally infringe claim 1 of the ‘741 Patent.

### (3) VGA Graphic Cards

IBM accuses ASUS’s VGA graphic card products of literally infringing claim 1 of the ‘741 Patent. (CIB at 31.) To prove literal infringement, IBM must show that the accused VGA graphics cards practice each of the steps of the claimed method. *Franks Casing Crew & Rental Tools, Inc.*, 389 F.3d at 1378. In addition, because the preamble of claim 1 has been construed as a limitation, IBM must show that the accused products practice the method of claim 1 to cool a computer having a plurality of components and at least one variable rate fan cooling unit. (*Id.*)

The specification of the ‘741 Patent differentiates between a “computer” and a “component” and explicitly identifies a graphics adaptor as a component. (*See* JX-1 at 2:57-65, 3:34-35, Figs. 1, 4.) The accused ASUS VGA graphics cards cannot be both a “computer” and one of the “plurality of components” included in a computer and, thus, cannot satisfy the limitation of claim 1 requiring “a computer having a plurality of components.” (*See* RRX-060C



[REDACTED]

(Stevenson Reb. Wit. Stat.) at ¶ 214; Polish Tr. at 403:6-11.) Additionally, the accused graphics cards cannot perform a “method for cooling a computer.” (RRX-060C (Stevenson Reb. Wit. Stat.) at ¶ 214; Polish Tr. at 401:12-14.)

Accordingly, the ALJ finds that the accused VGA graphics cards do not satisfy all the limitations of claim 1 and, therefore, do not literally infringe claim 1 of the ‘741 Patent.

#### (4) Motherboards

IBM accuses ASUS’s motherboard products of literally infringing claim 1 of the ‘741 Patent. (CIB at 33.) To prove literal infringement, IBM must show that the accused VGA graphics cards practice each of the steps of the claimed method. *Franks Casing Crew & Rental Tools, Inc.*, 389 F.3d at 1378. In addition, because the preamble of claim 1 has been construed as a limitation, IBM must show that the accused products practice the method of claim 1 to cool a computer having a plurality of components and at least one variable rate fan cooling unit. (*Id.*)

The evidence of record shows that the accused motherboards shipped to the United States do not include a CPU or a variable rate fan. (RRX-060C (Stevenson Reb. Wit. Stat.) at ¶¶ 259-260; Stevenson Tr. at 1282:6-12.) Without a CPU, the accused motherboards cannot run the Q-fan software that IBM asserts performs the method of claim 1. (RRX-060C (Stevenson Reb. Wit. Stat.) at ¶ 259.) Additionally, without a variable speed fan, the accused motherboards do not satisfy the limitation of claim 1 of the ‘741 Patent requiring “at least one variable rate fan cooling unit.”

Further, the evidence of record indicates that the accused motherboards, when operational in a computer with a CPU and variable speed fan, use a temperature sensor [REDACTED] [REDACTED] to vary the rate of the fan. (See RRX-060C (Stevenson Reb. Wit. Stat.) at ¶¶ 119, 262.) [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] IBM's expert Dr. Polish admitted at the hearing that in order to implement the cooling system in the accused motherboards a temperature sensor is required. Specifically, Dr. Polish testified:

Q. Let's move on to predetermined cooling requirement. So we have established this already, but the accused products in this case, the accused products, you can agree that in all of the accused products, the temperature sensor is required to vary the speed of the fan. Correct?

A. The way the code is written in the ASUS products, yes.

Q. If you didn't have the temperature sensor, then the cooling system wouldn't work?

A. Right, the code that's on the ASUS products all require temperature sensors in order to function . . . With the one exception of the VGA cards that can do it based upon operating mode.

(Polish Tr. at 404:2-17.)

The limitation "obtaining a predetermined cooling requirement" of claim 1 of the '741 Patent has been construed herein to mean "getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor." (*Supra* at IV.E.) However, as discussed above, the evidence of record shows that a temperature sensor is required in order to determine the cooling level used to vary the fan in ASUS's accused motherboards. Additionally, the evidence shows that the cooling level is based on the current temperature of the component being cooled. Accordingly, the ALJ finds that ASUS's accused motherboards do not practice the "obtaining a predetermined cooling requirement" step of claim 1 of the '741 Patent. Additionally, because the motherboards are shipped without a CPU and variable speed fan, the ALJ finds that ASUS's accused motherboards do not practice a "method for cooling a computer

[REDACTED]

having a plurality of components and at least one variable rate fan cooling unit.” Because the accused motherboards do not satisfy every limitation of asserted claim 1, the ALJ finds that ASUS’s accused motherboards do not literally infringe claim 1 of the ‘741 Patent.

**(5) Servers**

IBM accuses ASUS’s servers of literally infringing claim 1 of the ‘741 Patent. (CIB at 34.) To prove literal infringement, IBM must show that the accused servers practice each of the steps of the claimed method. *Franks Casing Crew & Rental Tools, Inc.*, 389 F.3d at 1378. In addition, because the preamble of claim 1 has been construed as a limitation, IBM must show that the accused products practice the method of claim 1 to cool a computer having a plurality of components and at least one variable rate fan cooling unit. (*Id.*)

The evidence of record shows that the accused servers shipped to the United States do not include a CPU and in many instances do not include a variable rate fan. (RRX-060C (Stevenson Reb. Wit. Stat.) at ¶¶ 292-293; Polish Tr. 500:5-13.) [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Further, the evidence of record indicates that the accused servers, when operational with a CPU and variable speed fan, use a temperature sensor [REDACTED] [REDACTED] to vary the rate of the fan. (See RRX-060C (Stevenson Reb. Wit. Stat.) at ¶¶ 294-295.)

[REDACTED]  
[REDACTED] IBM’s expert Dr. Polish

[REDACTED]

admitted at the hearing that in order to implement the cooling system in the accused servers a temperature sensor is required. Specifically, Dr. Polish testified:

Q. Let's move on to predetermined cooling requirement. So we have established this already, but the accused products in this case, the accused products, you can agree that in all of the accused products, the temperature sensor is required to vary the speed of the fan. Correct?

A. The way the code is written in the ASUS products, yes.

Q. If you didn't have the temperature sensor, then the cooling system wouldn't work?

A. Right, the code that's on the ASUS products all require temperature sensors in order to function . . . With the one exception of the VGA cards that can do it based upon operating mode.

(Polish Tr. at 404:2-17.)

The limitation "obtaining a predetermined cooling requirement" of claim 1 of the '741 Patent has been construed herein to mean "getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor." (*Supra* at IV.E.) However, as discussed above, the evidence of record shows that a temperature sensor is required in order to determine the cooling level used to vary the fan in ASUS' accused servers. Additionally, the evidence shows that the cooling level is based on the current temperature of the component being cooled. Accordingly, the ALJ finds that ASUS's accused servers do not practice the "obtaining a predetermined cooling requirement" step of claim 1 of the '741 Patent. Additionally, because the servers are shipped without a CPU and many without a variable speed fan, the ALJ finds that ASUS's accused servers do not practice a "method for cooling a computer having a plurality of components and at least one variable rate fan cooling unit." Because the

[REDACTED]

accused servers do not practice every limitation of asserted claim 1, the ALJ finds that ASUS's accused servers do not literally infringe claim 1 of the '741 Patent.

**(6) Barebones**

IBM accuses ASUS's barebones computers of literally infringing claim 1 of the '741 Patent. (CIB at 35.) To prove literal infringement, IBM must show that the accused servers practice each of the steps of the claimed method. *Franks Casing Crew & Rental Tools, Inc.*, 389 F.3d at 1378. In addition, because the preamble of claim 1 has been construed as a limitation, IBM must show that the accused products practice the method of claim 1 to cool a computer having a plurality of components and at least one variable rate fan cooling unit. (*Id.*)

The evidence of record shows that the accused barebones computers shipped to the United States do not include a CPU and in many instances do not include a variable rate fan.

(RRX-060C (Stevenson Reb. Wit. Stat.) at ¶¶ 322-323.) [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Further, the evidence of record indicates that the accused servers, when operational with a CPU and variable speed fan, use a temperature sensor [REDACTED]

[REDACTED] to vary the rate of the fan. (See RRX-060C (Stevenson Reb. Wit. Stat.) at ¶ 324.) [REDACTED]

[REDACTED]

[REDACTED] IBM's expert Dr. Polish admitted at the hearing that in order to implement the cooling system in the accused barebones computers a temperature sensor is required. Specifically, Dr. Polish testified:

[REDACTED]

Q. Let's move on to predetermined cooling requirement. So we have established this already, but the accused products in this case, the accused products, you can agree that in all of the accused products, the temperature sensor is required to vary the speed of the fan. Correct?

A. The way the code is written in the ASUS products, yes.

Q. If you didn't have the temperature sensor, then the cooling system wouldn't work?

A. Right, the code that's on the ASUS products all require temperature sensors in order to function . . . With the one exception of the VGA cards that can do it based upon operating mode.

(Polish Tr. at 404:2-17.)

The limitation "obtaining a predetermined cooling requirement" of claim 1 of the '741 Patent has been construed herein to mean "getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor." (*Supra* at IV.E.) However, as discussed above, the evidence of record shows that a temperature sensor is required in order to determine the cooling level used to vary the fan in ASUS's accused barebones computers. Additionally, the evidence shows that the cooling level is based on the current temperature of the component being cooled. Accordingly, the ALJ finds that ASUS's accused barebones computers do not practice the "obtaining a predetermined cooling requirement" step of claim 1 of the '741 Patent. Additionally, because the barebones computers are shipped without a CPU and many without a variable speed fan, the ALJ finds that ASUS's accused barebones computers do not practice a "method for cooling a computer having a plurality of components and at least one variable rate fan cooling unit." Because the accused servers do not practice every limitation of asserted claim 1, the ALJ finds that ASUS's accused barebones computers do not literally infringe claim 1 of the '741 Patent.

**b) Doctrine of Equivalents**

IBM argues that all of the accused products infringe asserted claim 1 of the '741 Patent under the doctrine of equivalents when operated by ASUS customers. (CIB at 36.) Both ASUS and the Staff argue that IBM has failed to provide sufficient evidence and analysis to support a finding of infringement under DOE. (RIB at 74; SIB at 46.)

IBM relies entirely on the conclusory testimony of its expert Dr. Polish in support of its argument that the accused products infringe claim 1 under DOE. As an example, Dr. Polish testified with respect to ASUS' accused Eee PC products that:

Any difference ASUS may assert that exists between its Eee PC products and each element of the asserted claim are insubstantial as each ASUS Eee PC Product is equivalent in structure, function and operation to the inventions of the asserted '741 Patent claim, and performs the same function, in substantially the same way to achieve substantially the same results as the claimed inventions of the '741 Patent asserted claim.

(CX-2054 (Polish Wit. Stat) at ¶ 189; see also id. at ¶ 295 (ASUS notebook products), ¶ 385 (ASUS VGA card products), ¶ 470 (ASUS motherboard products), ¶ 523 (ASUS server products), ¶ 567 (ASUS barebones products).) Because IBM relies entirely on the conclusory testimony of Dr. Polish who fails to provide an element by element analysis showing how the limitations in claim 1 of the '741 Patent are equivalent to elements in the accused products, the ALJ finds that IBM has failed to establish a prima facie case of infringement under the doctrine of equivalents. *Warner-Jenkinson Co.*, 520 U.S. at 40 (holding that "[t]he determination of equivalence should be applied as an objective inquiry on an element-by-element basis.") Accordingly, the ALJ finds that the accused products do not infringe claim 1 of the '741 Patent under the doctrine of equivalents.



### c) Induced and Contributory Infringement

IBM argues that ASUS induces infringement of claim 1 of the '741 Patent with respect to all of the accused products. (CIB at 38.) IBM also argues that ASUS contributes to the infringement of claim 1 through the sale of its VGA cards, motherboards, servers, and barebones products. (*Id.* at 41.) ASUS argues that IBM has failed to prove that it either induces or contributes to the infringement of claim 1 of the '741 Patent. (RIB at 74-75.) The Staff also argues that ASUS does not indirectly infringe claim 1.

As discussed in detail, *supra*, the ALJ has found that ASUS's accused products do not directly infringe claim 1 of the '741 Patent. Thus, there can be no indirect infringement. Accordingly, the ALJ finds that ASUS neither induces infringement nor contributes to the infringement of claim 1 of the '741 Patent. *See Broadcom Corp.*, 543 F.3d at 697 (stating, "In order to prevail on an inducement claim, the patentee must establish 'first that there has been direct infringement, and second that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement.'"); *see also Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed.Cir.2004) ("Indirect infringement, whether inducement to infringe or contributory infringement, can only arise in the presence of direct infringement.").

## VI. VALIDITY

### A. Background

One cannot be held liable for practicing an invalid patent claim. *See Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). However, the claims of a patent are presumed to be valid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed.



[REDACTED]

Cir. 1986). Although a complainant has the burden of proving a violation of section 337, it can rely on this presumption of validity.

As the respondent, ASUS has the burden of overcoming the presumption that the asserted patents are valid and must prove invalidity by clear and convincing evidence in order to do so. *Technology Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008) (stating, “When an alleged infringer attacks the validity of an issued patent, [the] well-established law places the burden of persuasion on the attacker to *prove invalidity by clear and convincing evidence.*” (emphasis added)); *see also Checkpoint Systems, Inc. v. United States Int’l Trade Comm’n*, 54 F.3d 756, 761 (Fed. Cir. 1995). ASUS’s burden of persuasion *never shifts* to IBM; the risk of “decisional uncertainty” remains on the respondent. *Id.*; *see also PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1303, 1305 (Fed. Cir. 2008); *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1360 (Fed. Cir. 2007). Thus, it is ASUS’s burden to prove by clear and convincing evidence that any of the alleged prior art references anticipate or render obvious the asserted claims of the patents in suit. Failure to do so means that ASUS loses on this point. *Id.* (stating, “[I]f the fact trier of the issue is left uncertain, the party with the burden [of persuasion] loses.”).

ASUS also bears the burden of going forward with evidence, *i.e.*, the burden of production. *Id.* This is “a shifting burden the allocation of which depends on where in the process of a trial the issue arises.” *Id.* However, this burden does not shift until a respondent presents “evidence that might lead to a conclusion of invalidity.” *Pfizer*, 480 F.3d at 1360. Once a respondent “has presented a prima facie case of invalidity, the patentee has the burden of going forward with rebuttal evidence.” *Id.*

## **B. Anticipation**

[REDACTED]

A patent may be found invalid as anticipated under 35 U.S.C. § 102(a) if “the invention was known or used by others in this country, or patented or described in a printed publication in this country, or patented or described in a printed publication in a foreign country, before the invention thereof by the applicant for patent.” 35 U.S.C. § 102(a). A patent may be found invalid as anticipated under 35 U.S.C. § 102(b) if “the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.” 35 U.S.C. § 102(b). Under 35 U.S.C. § 102(e), a patent is invalid as anticipated if “the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent.” 35 U.S.C. § 102(e). Anticipation is a question of fact. *Texas Instruments, Inc. v. U.S. Int’l Trade Comm’n*, 988 F.2d 1165, 1177 (Fed. Cir. 1993) (“*Texas Instruments IP*”). Anticipation is a two-step inquiry: first, the claims of the asserted patent must be properly construed, and then the construed claims must be compared to the alleged prior art reference. *See, e.g., Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003). It is axiomatic that claims are construed the same way for both invalidity and infringement. *W.L. Gore v. Garlock, Inc.*, 842 F.2d 1275, 1279 (Fed. Cir. 2008.)

“Claimed subject matter is ‘anticipated’ when it is not new; that is, when it was previously known. Invalidation on this ground requires that *every element and limitation* of the claim was *previously described in a single prior art reference*, either *expressly or inherently*, so as to place a person of ordinary skill in possession of the invention.” *Sanofi-Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1082 (Fed. Cir. 2008) (emphasis added) (citing *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1379 (Fed. Cir. 2003) and *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1267-69 (Fed. Cir. 1991)).

[REDACTED]

To anticipate, a single prior art reference must be enabling and it must describe the claimed invention, *i.e.*, a person of ordinary skill in the field of the invention must be able to practice the subject matter of the patent based on the prior art reference without undue experimentation. *Sanofi*, 550 F.3d at 1082. The presence in said reference of *both* a specific description and enablement of the subject matter at issue are required. *Id.* at 1083.

To anticipate, a prior art reference also must disclose all elements of the claim within the four corners of said reference. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (“*NMF*”); *see also Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1345 (Fed. Cir. 2007) (stating, “Anticipation is established by documentary evidence, and requires that every claim element and limitation is set forth in a single prior art reference, in the same form and order as in the claim.”). Further, “[b]ecause the hallmark of anticipation is prior invention, the prior art reference--in order to anticipate under 35 U.S.C. § 102--must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Id.* (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)). The Federal Circuit explained this requirement as follows:

The meaning of the expression ‘arranged as in the claim’ is readily understood in relation to claims drawn to things such as ingredients mixed in some claimed order. In such instances, a reference that discloses all of the claimed ingredients, but not in the order claimed, would not anticipate, because the reference would be missing any disclosure of the limitations of the claimed invention ‘arranged as in the claim.’ But the ‘arranged as in the claim’ requirement is not limited to such a narrow set of ‘order of limitations’ claims. Rather, *our precedent informs that the ‘arranged as in the claim’ requirement applies to all claims and refers to the need for an anticipatory reference to show all of the limitations of the claims arranged or combined in the same way as recited in the claims, not merely in a particular order.* The test is thus more accurately understood to mean ‘arranged or combined in the same way as in the claim.’

[REDACTED]

*Id.* at 1370 (emphasis added). Therefore, it is not enough for anticipation that a prior art reference simply contains all of the separate elements of the claimed invention. *Id.* at 1370-71 (stating that “it is not enough [for anticipation] that the prior art reference discloses part of the claimed invention, which an ordinary artisan might supplement to make the whole, or that it includes multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention.” (emphasis added)). Those elements must be arranged or combined in said reference in the same way as they are in the patent claim.

If a prior art reference does not expressly set forth a particular claim element, it still may anticipate the claim if the missing element is inherently disclosed by said reference. *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002); *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherent anticipation occurs when “the missing descriptive material is ‘necessarily present,’ not merely probably or possibly present, in the prior art.” (*Id.*); see also *Rhino Assocs. v. Berg Mfg. & Sales Corp.*, 482 F. Supp.2d 537, 551 (M.D. Pa. 2007). In other words, inherency may not be established by probabilities or possibilities. See *Continental Can*, 948 F.2d at 1268. Thus, “[t]he mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Id.*

The critical question for inherent anticipation here is whether, as a matter of fact, practicing an alleged prior art reference necessarily features or results in each and every limitation of the asserted claim at issue. See, e.g., *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1320 (Fed. Cir. 2004). Such is the case even if one of ordinary skill in the art would not have recognized said inherent anticipation at the time of the invention of the ‘829 Patent. *Id.* at 1320-21.

[REDACTED]

If there are “slight differences” between separate elements disclosed in a prior art reference and the claimed invention, those differences “invoke the question of obviousness, not anticipation.” *NMI*, 545 F.3d at 1071; *see also Trintec*, 295 F.3d at 1296 (finding no anticipation and stating that “the difference between a printer and a photocopier may be minimal and obvious to those of skill in this art. Nevertheless, obviousness is not inherent anticipation.”). Statements such as “one of ordinary skill may, in reliance on the prior art, complete the work required for the invention,” and that “it is sufficient for an anticipation if the general aspects are the same and the differences in minor matters is only such as would suggest itself to one of ordinary skill in the art,” *actually relate to obviousness*, not anticipation. *Connell*, 722 F.2d at 1548; *see infra*.

**1. The ‘852 Patent**

**a) “SOCKS” Reference**

ASUS argues that the asserted claims of the ‘852 Patent are anticipated under 35 U.S.C. § 102 by the prior art paper of David Koblas & Michelle Koblas, “SOCKS,” UNIX Security Symposium published in September 1992 (“SOCKS reference”), under IBM’s proposed claim construction. (RIB at 119-122.) According to ASUS, the SOCKS reference contains each and every limitation of the asserted claims of the ‘852 Patent and IBM has failed to predate this prior art reference by arguing that the ‘852 invention was conceived as early as December 1990. (RIB at 115-119.)

IBM argues that the SOCKS reference is not prior art since the ‘852 invention was conceived in December 1990. (CIB at 76-77; CRB at 37-41.) IBM further argues that the reference fails to disclose each and every limitation of the asserted claims and that it is not

[REDACTED]

directed toward message routing but to the transfer of data between sockets. (CIB at 77-78; CRB at 41-43.)

Staff argues that under either parties' constructions, the '852 Patent is not anticipated by the SOCKS reference and that IBM has failed to establish an earlier date of invention for the '852 Patent. (SIB at 63; SRB at 18.) The ALJ finds that IBM has failed to meet its burden of proving that the '852 Patent predates the SOCKS reference. *See Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1577 (Fed. Cir. 1996) ("In assessing corroboration of oral testimony, courts apply a rule of reason analysis. Under a rule of reason analysis, "an evaluation of all pertinent evidence must be made so that a sound determination of the credibility of the inventor's story may be reached.") (internal citation omitted). IBM has failed to meet its burden of showing that the '852 invention was allegedly conceived in December 1990 and that the inventors continued to work full time on the invention until the filing of the patent [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Thus, given the contradictory testimony from the two named inventors of the '852 Patent, the ALJ finds that IBM has failed to prove an earlier invention date for the '852 Patent than the SOCKS reference. As such, the SOCKS reference is prior art under 35 U.S.C. § 102(a).

The only evidence presented were analyses and rebuttals performed under IBM's proposed claim construction. (RX-24C (Olivier Direct) at Q 54; RIB at 115-121; SIB at 63; CIB at 77-78.) The ALJ has, however, adopted ASUS's and Staff's claim construction. Therefore,

[REDACTED]

there is no evidence before the ALJ as it relates to the SOCKS reference under ASUS's claim construction and, as such, ASUS has failed to meet its burden of showing by clear and convincing evidence that the '852 Patent is anticipated by the SOCKS reference.

Nevertheless, even under the ALJ's construction and based on the limited evidence before the ALJ, the SOCKS reference fails to disclose certain limitations of claim 1 of the '852 Patent. *See Sanofi-Synthelabo*, 550 F.3d at 1082 (“Claimed subject matter is ‘anticipated’ when it is not new; that is, when it was previously known. Invalidation on this ground requires that *every element and limitation* of the claim was *previously described in a single prior art reference*, either *expressly or inherently*, so as to place a person of ordinary skill in possession of the invention.”). Specifically, the ALJ construed the “protocol port specific function which selects a routing destination for the message from a plurality of possible destinations” to mean that “the protocol port specific function actually selects the routing destination from a plurality of possible destinations.” The limited evidence before the ALJ shows that the SOCKS reference fails to disclose a method of routing messages and a message switch memory and, instead, simply acts as a bridge between two sockets. (CRX-71C at Q 47-48; RX-349 at Section 2.3.) There is no evidence that the SOCKS reference actually selects the routing destination from a plurality of possible destinations. (*Supra* IV.B.) As such, the SOCKS reference fails to disclose, at a minimum, the limitation of practicing a “protocol port specific function which selects a routing destination for the message from a plurality of possible destinations” of claim 1 of the '852 Patent.

Therefore, the ALJ finds that the asserted claims of the '852 Patent are not anticipated by the SOCKS reference because it fails to disclose each and every limitation of the asserted claims.



**b) McKay Patent**

ASUS asserts that U.S. Patent No. 4,893,307 (“McKay patent”) anticipates the asserted claims of the ‘852 Patent under 35 U.S.C. § 102. (RIB at 122.) ASUS, however, sets forth no arguments related to the McKay patent and, instead, incorporates by reference its argument and analysis in its pre-hearing brief. (RIB at 122.) The ALJ finds that simply referencing a pre-hearing brief and incorporating those arguments by reference is insufficient to constitute a discussion of the issue in the post-hearing brief.<sup>14</sup> Pursuant to Ground Rule 11.1,<sup>15</sup> ASUS has waived the opportunity to raise this issue.

**c) Packet Filter Reference**

ASUS asserts that the article “Packet Filtering in an IP Router” by Bruce Corbridge, Robert Henig, and Charles Slater of September/October 1991 (“Packet Filter reference”) anticipates the asserted claims of the ‘852 Patent under 35 U.S.C. § 102. (RIB at 122.) ASUS, however, sets forth no arguments related to the Packet Filter reference and, instead, incorporates by reference its argument and analysis in its pre-hearing brief. (RIB at 122.) The ALJ finds that simply referencing a pre-hearing brief and incorporating those arguments by reference is insufficient to constitute a discussion of the issue in the post-hearing brief. Pursuant to Ground Rule 11.1, ASUS has waived the opportunity to raise this issue.

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<sup>14</sup> Indeed, simply allowing a party to “incorporate by reference” to its pre-hearing brief is tantamount to allowing the parties to circumvent the page limitation for the post-hearing briefs set by the ALJ.

<sup>15</sup> Ground Rule 11.1 states (emphasis added):  
The post-trial brief shall discuss the issues and evidence tried within the framework of the general issues determined by the Commission’s Notice of Investigation, the general outline of the briefs as set forth in **Appendix B**, and those issues that are included in the pre-trial brief and any permitted amendments thereto. **All other issues shall be deemed waived.** . . .



[REDACTED]

2. The '829 Patent<sup>16, 17</sup>,

a) IBM 5140

The parties do not dispute that the IBM PC Convertible 5140 ("IBM 5140") is a prior art reference to the '829 Patent; the parties agree that model was introduced and sold by IBM and in public use in the U.S. from April 1986 through July 1989, which is earlier than the date of the '829 Patent. (RIB at 49; CRPFF 3238-3240.)

ASUS argues that claims 1 and 2 of the '829 Patent are invalid as anticipated by the IBM 5140 under 35 U.S.C. §§102(a) and 102(b). (RIB at 48-49.) It is ASUS's burden to prove by clear and convincing evidence that the '829 Patent is invalid. *See Tech. Licensing*, 545 F.3d at 1327. ASUS argues that the IBM 5140 discloses each element of the asserted claims under IBM's proposed claim construction, as well as under ASUS's proposed claim construction, except for ASUS's construction of the "signal generator circuit" element. (RIB at 47-48.) The ALJ notes that ASUS makes these assertions in less than a page and a half without much discussion of how the elements of the IBM 5140 actually anticipate the limitations of the claims of the '829 Patent. For example, ASUS asserts, generally, that [REDACTED]

[REDACTED]

[REDACTED]

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<sup>16</sup> ASUS argues that IBM's failure to address the validity of the '829 Patent in its Initial Post hearing brief constitutes a waiver under Ground Rule 11.1 such that the ALJ should deem the patent invalid. (RRB at 8, 31.) ASUS is correct that, under Ground Rule 11.1, should a party fail to address an issue in its initial post hearing brief, that issue will be deemed. The purpose of this rule is to provide the other party the opportunity to respond and to rebut any arguments and not to give any party the first and last word on the matter. However, failure to comply with this ground rule does not absolve the parties of meeting their burden(s) of proof, which in this case is a clear and convincing standard for ASUS. Regardless of IBM's failure to address these issues, ASUS must still meet its burden of proving by clear and convincing evidence that the '829 Patent is invalid.

<sup>17</sup> In this instance, the ALJ is permitting IBM to respond to ASUS invalidity arguments only to the extent it is actually responsive to ASUS's invalidity argument. To the extent that IBM raises any new issues, the ALJ will deem those arguments waived as set forth herein.

[REDACTED]

[REDACTED]

[REDACTED] (RIB at 48.)

The Staff agrees with ASUS that, if the ALJ adopts IBM's proposed construction, the asserted claims are anticipated by the IBM 5140, but further argues that, under a proper claim construction, the '829 Patent is not anticipated. (SIB at 29-30.)

IBM argues that claims 1 and 2 of the '829 Patent are not anticipated by the IBM 5140 because the IBM 5140 [REDACTED] [REDACTED] as defined by the '829 Patent, and because the external button on the IBM 5140 does not power on or off the computer but merely conserves power by suspending some of the operating components while the SRAM (memory) remains constantly powered. (CRB at 58-60.) IBM argues that, "if users cannot power off the SRAM, they cannot control energization of the 'data processing and storage components for processing and storing digital data.'" (CRB at 59.) Though ASUS's burden of persuasion never shifts to IBM, *Tech. Licensing*, 545 F.3d at 1327; *PowerOasis*, 522 F.3d at 1305; *Pfizer*, 480 F.3d at 1360, the ALJ notes that IBM does not set forth any arguments regarding the IBM 5140 except with respect to the SRAM. IBM fails to mention any other data processing or storage components of the IBM 5140 and whether or not they are supplied with direct current electrical power by the power supply claimed, as well as any additional limitations of claim 1 of the '829 Patent.

The evidence that the parties presented regarding the IBM 5140 is limited to analyses and rebuttals performed under the parties' proposed claim constructions. (RX-25C (Madisetti Direct) at Q43 & 87; RIB at 47-49; SIB at 29-30.) The ALJ has adopted his own claim construction, which is sometimes similar to the parties' proposed constructions and is sometimes not. The ALJ finds that ASUS has failed to meet its burden of proving by clear and convincing evidence

[REDACTED]

that the '829 Patent is anticipated under the proper claim construction. Every element and limitation of claim 1 must be disclosed by the IBM 5140 in order for the '829 Patent to be anticipated by the IBM 5140. *See Sanofi*, 550 F.3d at 1082. Based on the evidence before the ALJ, he finds that the IBM 5140 fails to disclose certain required limitations of the invention of the '829 Patent.

Specifically, the IBM 5140 fails to disclose, at a minimum, the pulse width modulation switching power supply claimed in claim 1 of the '829 Patent. The ALJ has found that said power supply must include a controllable component and a signal generator circuit, which is operatively connected to both the controllable component and the alternating current electrical main supply. The ALJ found that nothing in the specification of the '829 Patent supports reading a "stand-by power supply" limitation into claim 1. The ALJ also found that the claimed signal generator circuit must derive a low voltage direct current signal from the alternating current electrical main supply.

There is no evidence that the IBM 5140 discloses either the controllable component or the signal generator claimed in the '829 Patent. ASUS fails to explain whether the alleged controllable component, *i.e.*, a "PWM switching circuit that resides on the power supply board," (RIB at 48), supplies direct current electrical power to the electrically powered data processing and storage components of the IBM 5140 upon receiving a low voltage direct current electrical signal from the alleged signal generator circuit. The alleged "signal generator circuit" of the IBM 5140 includes [REDACTED] (RX-25C at Q 103.) The evidence shows that [REDACTED]

[REDACTED] (RX-25C at Q103 [REDACTED])

[REDACTED]

[REDACTED]

[REDACTED]; RX-268C; RX-615 at IBM\_179778; JX-34C at 65:1-22 and 158:2-21.) Thus, ASUS has failed to show that the IBM 5140 “controllably derives a low voltage direct current signal from said main supply.” If the alleged signal generator circuit is powered by an AC adapter, it receives direct current and voltage from the adapter, not alternating current from the main supply, as required by the claim. The ALJ finds that the use of an AC adapter would not enable a person of ordinary skill in this field to practice the subject matter of claim 1 of the ‘829 Patent without undue experimentation. *See, e.g., Sanofi*, 550 F.3d at 1082.

With respect to inherent anticipation, the IBM 5140 must necessarily feature or result in each and every limitation of claim 1. *Toro*, 355 F.3d at 1320. For at least the foregoing reason, *i.e.*, that using an AC adapter to supply direct current to the alleged signal generator circuit makes it impossible for said signal generator circuit to be operatively connected to the alternating current electrical main supply and thus to derive a low voltage direct current signal from the alternating current electrical main supply, the IBM 5140 does not inherently disclose this claim limitation.

Therefore, the ALJ finds that the IBM 5140 reference does not anticipate the ‘829 Patent.

#### **b) Mac IIcx**

ASUS argues that claims 1 and 2 of the ‘829 Patent are invalid as anticipated by the Apple Macintosh IIcx (“Mac IIcx”) desktop computer under 35 U.S.C. §§102(a) and 102(b). (RIB at 49.)<sup>18</sup> It is ASUS’s burden to prove by clear and convincing evidence that the ‘829 Patent is invalid. *See Tech. Licensing*, 545 F.3d at 1327. ASUS argues that the MacIIcx

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<sup>18</sup> ASUS argues that the Mac IIcx is prior art because it was introduced and sold by Apple and in public use in the U.S. between 1989 and 1991. (RIB at 51.) ASUS also argues that one of the Mac IIcx samples tested by ASUS’s expert was manufactured by Apple in May 1989 and included an Astec power supply that was manufactured in February 1989. (RIB at 51.)

[REDACTED]

discloses each element of the asserted claims under IBM's proposed claim construction, as well as under ASUS's proposed claim construction, except for ASUS's construction of the "signal generator circuit" element. (RIB at 49-51.) ASUS asserts, generally, that the pulse width switching power supply of the Mac Iicx is "an Astec switching power supply unit (PSU) and a startup circuit;" that the controllable component is "a PWM switching circuit inside the Astec PSU;" and that the signal generator circuit is "a startup circuit and an always-on power supply." (RIB at 49-50.) Rather than explain how the elements of the Mac Iicx actually anticipate the limitations of the claims of the '829 Patent, ASUS focuses on IBM's arguments that ASUS's expert did not test authentic samples of the Mac Iicx and that the Mac Iicx does not have the claimed controllable component. (RIB at 50.)

The Staff argues that IBM has presented sufficient evidence to rebut ASUS's arguments. (SIB at 31.)

IBM argues that ASUS fails to show that claims 1 and 2 of the '829 Patent are anticipated by the Mac Iicx because ASUS does not show that the Mac Iicx satisfies each and every element of the claims, particularly with respect to whether the Mac Iicx discloses "a controllable component that responds to the presence and absence of a low voltage DC signal to enable and disable the DC outputs as required by the asserted claims." (CRB at 57-58.) IBM argues that "there are other ways of implementing control over the power to the load that do not use a low voltage DC signal in the claimed manner." (CRB at 57-58.)

IBM also argues that that ASUS failed to offer evidence to substantiate that the two device samples that ASUS's counsel purchased and ASUS's expert tested are authentic Mac Iicx's. (CRB at 56-57.) Specifically, IBM questions whether the two Mac Iicx devices relied upon by ASUS's expert, Dr. Madisetti, for his opinion and analysis are authentic or qualify as

[REDACTED]

prior art, citing, *inter alia*, questionable evidence as to their date of manufacture, evidence of tampering, and a questionable chain of custody. (CRB at 56-57.) With respect to this argument, the ALJ finds that, pursuant to Ground Rule 11.1, IBM has waived any right of assertion. IBM failed to address the validity of the '829 Patent in its Initial Post-Hearing Brief and raised this issue for the first time in its Reply Brief not as a response to ASUS's arguments, but as a separate and distinct argument, thereby depriving ASUS of the opportunity to respond. As such, the ALJ finds that IBM may not question the authenticity of the Mac IICx references.

The evidence that the parties presented regarding the Mac IICx is limited to analyses and rebuttals performed under the parties' proposed claim constructions. (RX-25C (Madisetti Direct) at Q71; RIB at 49-51.) The ALJ has adopted his own claim construction, which is sometimes similar to the parties' proposed constructions and is sometimes not. The ALJ finds that ASUS has failed to meet its burden of proving by clear and convincing evidence that the '829 Patent is anticipated under the proper claim construction. Every element and limitation of claim 1 must be disclosed by the Mac IICx in order for the '829 Patent to be anticipated by the Mac IICx. *See Sanofi*, 550 F.3d at 1082. Based on the evidence before the ALJ, he finds that the Mac IICx fails to disclose certain required limitations of the invention of the '829 Patent.

Specifically, the Mac IICx fails to disclose, at a minimum, the pulse width modulation switching power supply claimed in claim 1 of the '829 Patent. The ALJ has found that said power supply must include a controllable component and a signal generator circuit, which is operatively connected to both the controllable component and the alternating current electrical main supply. The ALJ found that, upon receiving a low voltage direct current electrical signal, the claimed controllable component supplies direct current electrical power to the electrically powered data processing and storage components. The ALJ also found that the claimed signal

[REDACTED]

generator circuit must derive a low voltage direct current signal from the alternating current electrical main supply.

There is no evidence that the Mac IIcx discloses either the controllable component or the signal generator claimed in the '829 Patent. ASUS fails to explain whether the alleged controllable component, *i.e.*, a "PWM switching circuit inside the Astec PSU," (RIB at 50), supplies direct current electrical power to the electrically powered data processing and storage components of the Mac IIcx upon receiving a low voltage direct current electrical signal *from the alleged signal generator circuit*. The alleged "signal generator circuit" of the Mac IIcx is the trickle power supply, which provides the continuous voltage supply, and the startup circuit, which resides on the motherboard of the Mac IIcx. (RX 25C at Q75.) The evidence shows that said signal generator circuit is not operatively connected to the alternating current electrical main supply, because "it cannot controllably derive from the AC mains the low voltage direct current signal (*i.e.*, the PS on/off signal)." (RX-25C at Q75; RX-155C at ASUS\_321151; RX-157; RX-565 at ASUS\_320635 and ASUS\_320639.) Thus, ASUS has failed to show both that the alleged signal generator circuit of the Mac IIcx "controllably derives a low voltage direct current signal from said main supply" and that the alleged controllable component of the Mac IIcx receives a low voltage direct current electrical signal from the alleged signal generator circuit.

With respect to inherent anticipation, the Mac IIcx must necessarily feature or result in each and every limitation of claim 1. *Toro*, 355 F.3d at 1320. For at least the foregoing reason, *i.e.*, that the alleged signal generator circuit is not operatively connected to the alternating current electrical main supply and thus cannot derive a low voltage direct current signal from the alternating current electrical main supply, the Mac IIcx does not inherently disclose this claim limitation.

[REDACTED]

Therefore, the ALJ finds that the Mac IIcx references do not anticipate the '829 Patent.

**c) Mac II**

ASUS argues that claims 1 and 2 of the '829 Patent are invalid as anticipated by the Apple Macintosh II ("Mac II") desktop computer under 35 U.S.C. §§102(a) and 102(b). (RIB at 51.)<sup>19</sup> It is ASUS's burden to prove by clear and convincing evidence that the '829 Patent is invalid. *See Tech. Licensing*, 545 F.3d at 1327. ASUS argues that the MacII discloses each element of the asserted claims under IBM's proposed claim construction, as well as under ASUS's proposed claim construction, except for ASUS's construction of the "signal generator circuit" element. (RIB at 52-53.) ASUS asserts, generally, that the pulse width switching power supply of the Mac II is "a startup circuit and a Sony power supply unit (PSU);" that the controllable component is "a PWM switching circuit inside the Sony PSU;" and that the signal generator circuit is "a power control circuit." (RIB at 52.) Rather than explain how the elements of the Mac II actually anticipate the limitations of the claims of the '829 Patent, ASUS focuses on IBM's arguments that the Mac II does not meet the operatively connected limitation of the claimed signal generator circuit because it has a power-on circuit and a power-off circuit and the power-on circuit requires battery power. (RIB at 52-53.)

The Staff argues that IBM has presented sufficient evidence to rebut ASUS's arguments. (SIB at 31.)

IBM argues that ASUS fails to show that claims 1 and 2 of the '829 Patent are anticipated by the Mac II because ASUS does not show that the Mac II discloses a signal generator circuit that is operatively connected to the alternating current main supply or a controllable component that responds to the presence and absence of a low voltage DC signal. (CRB at 55.) IBM argues

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<sup>19</sup> ASUS argues that the Mac II is prior art because it was introduced and sold by Apple and in public use in the U.S. between 1987 and 1990. (RIB at 52.)



[REDACTED]

that the alleged signal generator circuit derives its low voltage direct current signal from a battery and that “there are ways of implementing control over the power to the load that do not use a low voltage DC signal as claimed,” thus ASUS failed to show that “any signal going to the power supply is in fact the same signal that enables and disables the DC outputs.” (CRB at 55.)

IBM also questions whether the Mac II device relied upon by ASUS’s expert, Dr. Madisetti, for his opinion and analysis are authentic or qualify as prior art. (CRB at 56.) As set forth *supra* in the previous section, with respect to the Mac IIcx, the ALJ finds that, pursuant to Ground Rule 11.1, IBM has waived any right of assertion regarding this argument. IBM failed to address the validity of the ‘829 Patent in its Initial Post-Hearing Brief and raised this issue for the first time in its Reply Brief not as a response to ASUS’s arguments, but as a separate and distinct argument, thereby depriving ASUS of the opportunity to respond. As such, the ALJ finds that IBM may not question the authenticity of the Mac II reference.

The evidence that the parties presented regarding the Mac IIcx is limited to analyses and rebuttals performed under the parties’ proposed claim constructions. (RX-25C (Madisetti Direct) at Q114; RIB at 51-52.) The ALJ has adopted his own claim construction, which is sometimes similar to the parties’ proposed constructions and is sometimes not. The ALJ finds that ASUS has failed to meet its burden of proving by clear and convincing evidence that the ‘829 Patent is anticipated under the proper claim construction. Every element and limitation of claim 1 must be disclosed by the Mac II in order for the ‘829 Patent to be anticipated by the Mac II. *See Sanofi*, 550 F.3d at 1082. Based on the evidence before the ALJ, he finds that the Mac II fails to disclose certain required limitations of the invention of the ‘829 Patent.

Specifically, the Mac II fails to disclose, at a minimum, the pulse width modulation switching power supply claimed in claim 1 of the ‘829 Patent. The ALJ has found that said

[REDACTED]

power supply must include a controllable component and a signal generator circuit, which is operatively connected to both the controllable component and the alternating current electrical main supply. The ALJ found that, upon receiving a low voltage direct current electrical signal, the claimed controllable component supplies direct current electrical power to the electrically powered data processing and storage components. The ALJ also found that the claimed signal generator circuit must derive a low voltage direct current signal from the alternating current electrical main supply.

There is no evidence that the Mac II discloses either the controllable component or the signal generator claimed in the '829 Patent. ASUS fails to explain whether the alleged controllable component, *i.e.*, a "PWM switching circuit inside the Sony PSU," (RIB at 52), supplies direct current electrical power to the electrically powered data processing and storage components of the Mac II upon receiving a low voltage direct current electrical signal from the alleged signal generator circuit. The alleged "signal generator circuit" of the Mac II is the power control circuit, which includes at least a power-on circuit and a power-off circuit. (RX 25C at Q118.) The evidence shows that said power-on circuit is powered by two 3-volt batteries and that the power-off circuit is powered by the Sony power supply unit, which is connected to the alternating current electrical main supply by an alternating current power cord. (RX-25C at Q118; RX-163 at ASUS\_321104; RX-171 at 23-26; RX-236 at ASUS\_320700.) Because the power-on circuit is battery-powered, ASUS has failed to show that the alleged signal generator circuit of the Mac II "controllably derives a low voltage direct current signal from said main supply." ASUS has also failed to show that the alleged signal generator circuit supplies a low voltage direct current electrical signal to the alleged controllable component and that the alleged controllable component supplies direct current electrical power to the electrically powered data

[REDACTED]

processing and storage components of the Mac II upon receiving a low voltage direct current electrical signal from the alleged signal generator circuit.

With respect to inherent anticipation, the Mac II must necessarily feature or result in each and every limitation of claim 1. *Toro*, 355 F.3d at 1320. For at least the foregoing reasons, *i.e.*, that the alleged signal generator circuit may not be operatively connected to the alternating current electrical main supply and would thus not derive a low voltage direct current signal from the alternating current electrical main supply, the Mac IIcx does not inherently disclose this claim limitation.

Therefore, the ALJ finds that the Mac II reference does not anticipate the '829 Patent.

#### **d) Mac Reference**

ASUS argues that claims 1 and 2 of the '829 Patent are invalid as anticipated by the Macintosh Family Hardware Reference ("Mac Reference") under 35 U.S.C. §§102(a) and 102(b). (RIB at 53.) It is ASUS's burden to prove by clear and convincing evidence that the '829 Patent is invalid. *See Tech. Licensing*, 545 F.3d at 1327. Here, ASUS makes nothing more than a one-paragraph cursory argument that the Mac Reference "discloses each element of the asserted claims" under IBM's proposed claim construction, as well as under ASUS's proposed claim construction, except for ASUS's construction of the "signal generator circuit" element. (RIB at 53.) This is the extent of ASUS's argument and evidence. Rather than explain how the elements of the Mac Reference actually anticipate the limitations of the claims of the '829 Patent, ASUS simply states that "IBM makes the same baseless argument with the Mac Reference as it did for the Mac II." (RIB at 53.)

The Staff argues that IBM has presented sufficient evidence to rebut ASUS's arguments. (SIB at 31.)

[REDACTED]

IBM did not address this reference. (*See generally* CRB at 54-63.)

The ALJ finds that simply making cursory assertions and conclusory arguments is insufficient for ASUS to meet the clear and convincing standard necessary to invalidate the '829 Patent.

Therefore, the ALJ finds that the Mac Reference does not anticipate the '829 Patent.

**e) Nelson Patent**

ASUS argues that claims 1 and 2 of the '829 Patent are invalid as anticipated U.S. Patent No. 4,291,366 ("Nelson Patent") under 35 U.S.C. §§102(a) and 102(b). (RIB at 53.) It is ASUS's burden to prove by clear and convincing evidence that the '829 Patent is invalid. *See Tech. Licensing*, 545 F.3d at 1327. ASUS argues that the Nelson Patent discloses each element of the asserted claims under IBM's proposed claim construction, as well as under ASUS's proposed claim construction, except for ASUS's construction of the "signal generator circuit" element. (RIB at 53-55.) ASUS asserts, generally, that the pulse width switching power supply of the Nelson Patent is a "switching regulated power supply;" that the controllable component is "a collection of circuitry . . . that forms a PWM switching circuit, which responds to a low voltage DC electrical signal . . . by enabling or disabling DC voltages output;" and that the signal generator circuit is a "remote shutoff" and a "local shutoff" where the remote shutoff "comparator can connect to additional logic circuitry to logically disable the switching regulated power supply." (RIB at 54.) Rather than explain how the elements of the Nelson Patent actually anticipate the limitations of the claims of the '829 Patent, ASUS focuses on IBM's argument that the Nelson Patent does not disclose the claimed pulse width modulation switching power supply. (RIB at 54-55.)

[REDACTED]

The Staff argues that IBM has presented sufficient evidence to rebut ASUS's arguments. (SIB at 31.)

IBM argues that ASUS failed to show that claims 1 and 2 of the '829 Patent are anticipated by the Nelson Patent because ASUS does not show that the Nelson Patent discloses the claimed pulse width modulation switching power supply. (CRB at 60.) IBM further argues that the Nelson Patent fails to disclose a "controllable component" and "a signal generator" as it instead describes a component for a larger system but does not describe the point of on/off control of the whole system." (CRB at 60-61.)

The evidence that the parties presented regarding the Nelson Patent is limited to analyses and rebuttals performed under the parties' proposed claim constructions. (RX-25C (Madisetti Direct) at Q141.) The ALJ has adopted his own claim construction, which is sometimes similar to the parties' proposed constructions and is sometimes not. The ALJ finds that ASUS has failed to meet its burden of proving by clear and convincing evidence that the '829 Patent is anticipated under the proper claim construction. Every element and limitation of claim 1 must be disclosed by the Nelson Patent in order for the '829 Patent to be anticipated by the Nelson Patent. *See Sanofi*, 550 F.3d at 1082. Based on the evidence before the ALJ, he finds that the Nelson Patent fails to disclose certain required limitations of the invention of the '829 Patent.

Specifically, the Nelson Patent fails to disclose, at a minimum, the pulse width modulation switching power supply claimed in claim 1 of the '829 Patent. The ALJ found that the term "pulse width modulation switching power supply" is used in the prior art; in fact, the '829 Patent discusses a 1989 reference, which describes "power supplies of the switching type." (JX-3 at col. 5, ll. 2-8.) The ALJ found that this type of prior art power supply is thoroughly described in the '829 Patent, (*see* JX-3 at col. 4, l. 60 – col. 5, l. 43), and that the claimed pulse

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width modulation switching power supply does have the same meaning as the term has in the prior art. The ALJ further find that the '829 Patent explicitly states, "Nearly all of today's personal computers use switching power supplies." (JX-3 at col. 5, ll. 32-33.) Thus, ASUS's argument that the Nelson Patent anticipates the '829 Patent merely because it "expressly describes the purpose of the invention" in the Nelson Patent as providing a "switching regulated power supply for supplying DC voltages," (RIB at 55), is entirely unconvincing.

Therefore, the ALJ finds that the Nelson Patent does not anticipate the '829 Patent.

#### **f) Pepper Patent**

ASUS argues that claims 1 and 2 of the '829 Patent are invalid as anticipated U.S. Patent No. 4,673,824 ("Pepper Patent") under 35 U.S.C. §§102(a) and 102(b). (RIB at 55.) It is ASUS's burden to prove by clear and convincing evidence that the '829 Patent is invalid. *See Tech. Licensing*, 545 F.3d at 1327. ASUS argues that the Pepper Patent discloses each element of the asserted claims under both parties' proposed claim constructions. (RIB at 55.) ASUS asserts, generally, that the pulse width switching power supply and controllable component of the '829 Patent are disclosed because the Pepper Patent includes a "main power supply" and that the signal generator circuit is a "stand-by power supply and switch circuit." (RIB at 55-56.) Rather than explain how the elements of the Pepper Patent actually anticipate the limitations of the claims of the '829 Patent, ASUS focuses on IBM's argument that the Pepper Patent only discloses a generic main power supply of conventional design and function. (RIB at 56.)

The Staff argues that IBM has presented sufficient evidence to rebut ASUS's arguments. (SIB at 31.)

IBM argues that ASUS failed to show that claims 1 and 2 of the '829 Patent are anticipated by the Pepper Patent because ASUS does not show that the Nelson Patent discloses

[REDACTED]

the claimed pulse width modulation switching power supply. (CRB at 60.) IBM further argues that the Pepper Patent relates to microprocessor-based instruments rather than a microcomputer and that “the instruments described in Pepper do not explicitly or inherently contain storage components.” (CRB at 61.)

The evidence that the parties presented regarding the Pepper Patent is limited to analyses and rebuttals performed under the parties’ proposed claim constructions. (RX-25C (Madisetti Direct) at Q129; RIB at 55.) The ALJ has adopted his own claim construction, which is sometimes similar to the parties’ proposed constructions and is sometimes not. The ALJ finds that ASUS has failed to meet its burden of proving by clear and convincing evidence that the ‘829 Patent is anticipated under the proper claim construction. Every element and limitation of claim 1 must be disclosed by the Pepper Patent in order for the ‘829 Patent to be anticipated by the Pepper Patent. *See Sanofi*, 550 F.3d at 1082. Based on the evidence before the ALJ, he finds that the Pepper Patent fails to disclose certain required limitations of the invention of the ‘829 Patent.

Specifically, the Pepper Patent fails to disclose, at a minimum, the pulse width modulation switching power supply claimed in claim 1 of the ‘829 Patent. The ALJ found that the term “pulse width modulation switching power supply” is used in the prior art; in fact, the ‘829 Patent discusses a 1989 reference, which describes “power supplies of the switching type.” (JX-3 at col. 5, ll. 2-8.) The ALJ found that this type of prior art power supply is thoroughly described in the ‘829 Patent, (*see* JX-3 at col. 4, l. 60 – col. 5, l. 43), and that the claimed pulse width modulation switching power supply does not have the same meaning as the term has in the prior art. The ALJ further find that the ‘829 Patent explicitly states, “Nearly all of today’s personal computers use switching power supplies.” (JX-3 at col. 5, ll. 32-33.) Thus, ASUS’s

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argument that the Pepper Patent anticipates the '829 Patent merely because a “[PWM switching] power supply was well known to one of skill in the art at the time of Pepper,” (RIB at 56), is entirely unconvincing.

Therefore, the ALJ finds that the Pepper Patent does not anticipate the '829 Patent.

### 3. The '741 Patent

#### a) Japanese Unexamined Patent Application Publication No. 1-214606 to Tanabe

ASUS argues that Japanese Unexamined Patent Application No. 1-214606 to Tanabe (“the Tanabe reference”) anticipates asserted claim 1 of the '741 patent under 35 U.S.C. § 102 (b). (RIB at 76.) The Tanabe reference was published on September 26, 1989 and was not considered by the patent examiner during the prosecution of the '741 patent. Because the Tanabe reference was published more than a year before the effective filing date of the '741 patent, the Tanabe reference constitutes prior art under 35 U.S.C. § 102(b). (See RX-114; RX-27 (certified English translation); *see also* JX-1.)

To prove anticipation, ASUS must show that the Tanabe reference discloses a method for cooling a computer that includes obtaining a predetermined cooling requirement for at least one component and varying the rate of at least one fan based on the obtained cooling requirements. (JX-1 at 5:51-58.) However, the evidence shows that Tanabe does not use predetermined cooling requirements for individual components to control the output of the fan. (See Polish Tr. at 1603:14-1606:10; CRX-5C (Polish Reb. Wit. Stat.) at ¶¶ 71-75.) Rather, the evidence shows that Tanabe adjusts the rate of the fan by estimating the cumulative heat impact on the whole system from whatever heat sources are detected to be operational. (CRX-5C (Polish Reb. Wit. Stat.) at ¶¶ 84, 87; Polish Tr. at 1568:14-1569:1, 1601:14-1606:10.) For all intents and purposes,



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Dr. Stevenson admitted this fact when he testified that the Tanabe reference attempts to control cooling according to “a measure of heat” of the device interior. (See RX-26 (Stevenson Wit. Stat.) at ¶¶ 143-144.) That is, the fan control system disclosed in the Tanabe reference controls the fan speed based on an estimate of the impact the generated heat from the sources will have on the computer interior, not on predetermined cooling requirements of any component(s). (See Polish Tr. at 1603:14-1606:10; CRX-5C (Polish Reb. Wit. Stat.) at ¶¶ 71-75, 77.)

Because, as discussed above, the Tanabe reference does not disclose a method for cooling a computer that practices all the steps of claim 1 of the ‘741 patent, the ALJ finds that the Tanabe reference does not anticipate asserted claim 1 of the ‘741 patent.

**b) Japanese Unexamined Patent Application No. 1-254797 to  
Takahashi**

ASUS argues that Japanese Unexamined Patent Application No. 1-254797 to Takahashi (“the Takahashi reference”) anticipates asserted claim 1 of the ‘741 Patent under 35 U.S.C. § 102 (b). (RIB at 79.) The Takahashi reference was published on October 15, 1990. (See RX-048 (certified English translation).) The Takahashi reference was considered by the patent examiner during the prosecution of the ‘741 Patent thus making ASUS’ burden of proving anticipation “especially difficult.” *Glaxo Group Ltd. v. Apotex, Inc.*, 376 F.3d 1339, 1348 (Fed. Cir. 2004); see also JX-2 at IBM00000183-186. Because the Takahashi reference was published more than a year before the effective filing date of the ‘741 Patent, the Takahashi reference constitutes prior art under 35 U.S.C. § 102(b). (See RX-048; see also JX-1.)

ASUS argues that the Takahashi reference anticipates claim 1 of the ‘741 Patent, but only under IBM’s proposed claim construction of the limitation “predetermined cooling requirement.” (See RX-26 (Stevenson Wit. Stat.) at ¶ 175.) More specifically, ASUS’s expert Dr. Stevenson testified that his opinion that the Takahashi reference anticipates claim 1 of the ‘741 Patent is

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based on his assumption “that the alleged invention recited in claim 1 of the ‘741 Patent covers cooling systems which use temperature sensors.” (RX-26 (Stevenson Wit. Stat.) at ¶ 167.)

According to ASUS, Takahashi discloses that the amount of cooling supplied to each package is based on temperature sensor measurements. (RIB at 80.) However, as construed herein, the limitation “obtaining a predetermined cooling requirement” has been held to exclude the use of temperature sensors to obtain the cooling requirement. (*Supra* at Section IV.D.) Therefore, the ALJ finds that ASUS has failed to prove by clear and convincing evidence that the Takahashi reference discloses the step of “obtaining a predetermined cooling requirement.” Accordingly, the ALJ finds that the Takahashi reference does not anticipate claim 1 of the ‘741 Patent.

**c) Japanese Unexamined Patent Application No. 1-226012 to Akitoshi**

ASUS argues that Japanese Unexamined Patent Application No. 1-226012 to Akitoshi (“the Akitoshi reference”) anticipates asserted claim 1 of the ‘741 Patent under 35 U.S.C. § 102(b). (RIB at 80.) The Akitoshi reference was published on September 8, 1987. (*See* RX-031 (certified English translation).) The Akitoshi reference was not considered by the patent examiner during the prosecution of the ‘741 Patent. Because the Akitoshi reference was published more than a year before the effective filing date of the ‘741 Patent, the Akitoshi reference constitutes prior art under 35 U.S.C. § 102(b). (*See* RX-031; see also JX-1.)

ASUS argues that the Akitoshi reference anticipates claim 1 of the ‘741 Patent, but only under IBM’s proposed claim construction of the limitation “predetermined cooling requirement.” (*See* RX-26 (Stevenson Wit. Stat.) at ¶ 192.) More specifically, ASUS’s expert Dr. Stevenson testified that his opinion that the Akitoshi reference anticipates claim 1 of the ‘741 Patent is based on his assumption “that the alleged invention recited in claim 1 of the ‘741 Patent covers cooling systems which sense the current temperature of the desired area to be cooled and require

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the use of a temperature sensor to vary the rate of the cooling fan.” (*Id.* at ¶ 184-185.) The evidence shows that the Akitoshi reference discloses a cooling device that senses the temperature of the component to be cooled using a temperature sensor and based on the sensed temperature varies the speed of the fan. (*Id.* at ¶ 183; CRX-5C (Polish Reb. Wit. Stat.) at ¶ 125.) The limitation “obtaining a predetermined cooling requirement” has been construed herein to mean “getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor.” (*Supra* at Section IV.D.) However, as discussed above, the evidence of record shows that a temperature sensor is required by Akitoshi to determine the cooling level used to vary the fan. Additionally, the evidence shows that the cooling level is based on the current temperature of the component being cooled. Therefore, the ALJ finds that ASUS has failed to prove by clear and convincing evidence that the Akitoshi reference discloses the step of “obtaining a predetermined cooling requirement.” Accordingly, the ALJ finds that the Akitoshi reference does not anticipate claim 1 of the ‘741 Patent.

### C. Obviousness

Included within the presumption of validity is a presumption of non-obviousness.

*Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 714 (Fed. Cir. 1984).

Obviousness is grounded in 35 U.S.C. § 103, which provide, *inter alia*, that:

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 negative by the manner in which the invention was made.

35 U.S.C. § 103(a). Under 35 U.S.C. § 103(a), a patent is valid unless “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a

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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.” 35 U.S.C. § 103(a). The ultimate question of obviousness is a question of law, but “it is well understood that there are factual issues underlying the ultimate obviousness decision.” *Richardson-Vicks Inc.*, 122 F.3d at 1479; *Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 863 (Fed. Cir. 1993).

Once claims have been properly construed, “[t]he second step in an obviousness inquiry is to determine whether the claimed invention would have been obvious as a legal matter, based on underlying factual inquiries including: (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) secondary considerations of non-obviousness” (also known as “objective evidence”). *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1354 (Fed. Cir. 1999), citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The ultimate determination of whether an invention would have been obvious is a legal conclusion based on underlying findings of fact. *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999).

Obviousness may be based on any of the alleged prior art references or a combination of the same, and what a person of ordinary skill in the art would understand based on his knowledge and said references. If all of the elements of an invention are found, then:

a proper analysis under § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success. *Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure.*

*Velander v. Garner*, 348 F.3d 1359, 1363 (Fed. Cir. 2003) (emphasis added) (internal citations omitted).

[REDACTED]

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. *See C.R. Bard v. M3 Sys.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998). For example:

*[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, 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. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.*

*KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418-19 (2007) (emphasis added). The Federal Circuit case law previously required that, in order to prove obviousness, the patent challenger must demonstrate, by clear and convincing evidence, that there is a “teaching, suggestion, or motivation to combine. The Supreme Court has rejected this “rigid approach” employed by the Federal Circuit in *KSR Int'l Co. v. Teleflex Inc.*, 500 U.S. 398 (2007), 127 S.Ct. 1727, 1739. The Supreme Court stated:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Sakraida and Anderson's-Black Rock* are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established function.

Following these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement. Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands

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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. To facilitate review, this analysis should be made explicitly. See *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusions of obviousness”). As our precedents make clear, however, the analysis need not seek out 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.

[...]

The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way. In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. Granting patent protection to advance that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility.

*KSR*, 550 U.S. at 417-419; 127 S.Ct. at 1740-41. The Federal Circuit has harmonized the *KSR* opinion with many prior circuit court opinions by holding that when 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, or carry out the claimed process, 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)(citing *Medichem S.A. v. Rolabo S.L.*, 437 F.3d 1175, 1164 (Fed. Cir. 2006)); *Noelle v. Lederman*, 355 F.3d 1343, 1351-52 (Fed. Cir. 2004); *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1121 (Fed. Cir. 2000) and *KSR*, 127 S.Ct. at 1740 (“a combination of elements

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‘must do more than yield a predictable result’; combining elements that work together ‘in an unexpected and fruitful manner’ would not have been obvious”). Further, a suggestion to combine need not be express and may come from the prior art, as filtered through the knowledge of one skilled in the art. *See Certain Lens-Fitted Film Pkgs.*, Inv. No. 337-TA-406, Order No. 141 at 6 (May 24, 2005).

“Secondary considerations,” also referred to as “objective evidence of non-obviousness,” must be considered in evaluating the obviousness of a claimed invention, but the existence of such evidence does not control the obviousness determination. *Graham*, 383 U.S. at 17-18. A court must consider all of the evidence under the *Graham* factors before reaching a decision on obviousness. *Richardson-Vicks Inc.*, 122 F.3d at 1483-84. Objective evidence of non-obviousness may include evidence of the commercial success of the invention, long felt but unsolved needs, failure of others, copying by others, teaching away, and professional acclaim. *See Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 894 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 857 (1984); *Avia Group Int'l, Inc. v. L.A. Gear California*, 853 F.2d 1557, 1564 (Fed. Cir. 1988); *In re Hedges*, 783 F.2d 1038, 1041 (Fed. Cir. 1986); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565 (Fed. Cir. 1986), *cert. denied*, 479 U.S. 1034 (1987). The burden of showing secondary considerations is on the patentee and, in order to accord objective evidence substantial weight, a patentee must establish a nexus between the evidence and the merits of the claimed invention; a *prima facie* case is generally set forth “when the patentee shows both that there is commercial success, and that the thing (product or method) that is commercially successful is the invention disclosed and claimed in the patent.” *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995); *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988), *cert. denied*, 488 U.S. 956 (1988); *Certain Crystalline*

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*Cefadroxil Monohydrate*, Inv. No. 337-TA-293, Comm'n Op. (March 15, 1990). Once a patentee establishes nexus, the burden shifts back to the challenger to show that, e.g., commercial success was caused by “extraneous factors other than the patented invention, such as advertising, superior workmanship, etc.” (*Id.*) at 1393.

Generally, a prior art reference that teaches away from the claimed invention does not create *prima facie* case of obviousness. *In re Gurley*, 27 551, 553 (Fed. Cir. 1994); *see also Andersen Corp. v. Pella Corp.*, No. 2007-1536, 2008 U.S. App. LEXIS 24087, \*13-18 (Fed. Cir. Nov. 19, 2008); *Certain Rubber Antidegradants*, Inv. No. 337-TA-533 (Remand), Final ID (Dec. 3, 2008) (stating, “KSR reaffirms that obviousness is negated when the prior art teaches away from the invention.”)). However, the nature of the teaching is highly relevant. *Id.* “A reference may be said to *teach away* when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *Id.* (emphasis added). For example, “a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant.” *Id.*

## 1. The ‘829 Patent

### a) Analysis of the Asserted Claims

ASUS argues that the Pepper Patent, in combination with “PWM switching power supply prior art, including the knowledge of one of skill in the art, *The Winn Rosch Hardware Bible*, or U.S. Patent No. 4,709,320,” invalidates claims 1 and 2 of the ‘829 Patent for obviousness under 35 U.S.C. §103. (RIB at 56.) ASUS makes cursory arguments, which span no more than a page of its brief, that “PWM switching power supplies were well known prior to the ‘829 Patent, and even the Pepper patent,” (RIB at 56), and that the “teachings of the Winn Rosch Hardware Bible



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and [U.S. Patent No. 4,709,320] and the background knowledge possessed by persons of ordinary skill in the art provide the reasons to combine known prior elements to obtain the claimed subject matter of the '829 Patent." (RIB at 57.)

The Staff argues that, under the proper claim construction, the asserted claims of the '829 Patent are not obvious and, moreover, that ASUS has failed to demonstrate by clear and convincing evidence how one of ordinary skill in the art would actually combine the references. (SIB at 31.)

IBM argues that there is no motivation to combine the Pepper Patent with the cited references. (CRB at 63.) IBM also addresses a variety of "secondary considerations," also known as "objective evidence of non-obviousness." (CRB at 63-66.)

The ALJ finds that, by simply making cursory assertions and conclusory arguments, ASUS has blatantly failed to meet the clear and convincing standard necessary to invalidate the '829 Patent based on obviousness. *See PharmaStem*, 491 F.3d at 1360 (stating that a patent challenger must "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, or carry out the claimed process, and would have had a reasonable expectation of success in doing so."); *see also Tech. Licensing*, 545 F.3d at 1327 (stating, "When an alleged infringer attacks the validity of an issued patent, [the] well-established law places the burden of persuasion on the attacker to *prove invalidity by clear and convincing evidence*." (emphasis added)). A person is not entitled to a patent if the differences between the claimed invention 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." 35 U.S.C. §103. The underlying factual inquiries relating to non-obviousness include: 1) the scope and content of the prior art, 2) the level of ordinary skill in

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the art, 3) the differences between the claimed invention and the prior art, and 4) secondary considerations of non-obviousness, such as long-felt need, commercial success, and the failure of others. *See Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). ASUS addresses none of these inquiries and, further, has failed to provide any motivation for one of ordinary skill in the art to combine the references, which is also required for a finding of obviousness. *See C.R. Bard*, 157 F.3d at 1352.

In addition, as the ALJ found *supra*, the Pepper Patent fails to disclose, at a minimum, the pulse width modulation switching power supply claimed in claim 1 of the '829 Patent. The term "pulse width modulation switching power supply" is used in the prior art, (JX-3 at col. 5, ll. 2-8), and this type of prior art power supply is thoroughly described in the '829 Patent. (*See* JX-3 at col. 4, l. 60 – col. 5, l. 43.) The '829 Patent explicitly states, "Nearly all of today's personal computers use switching power supplies." (JX-3 at col. 5, ll. 32-33.) Thus, ASUS's arguments that the Pepper Patent discloses a PWM switching power supply of "conventional design and function" and that the additional references on which it relies for a determination of obviousness "disclose conventional PWM switching power supplies," (RIB at 57), are entirely unconvincing.

Therefore, the ALJ finds that the Pepper Patent, in combination with the *Winn Rosch Hardware Bible*, U.S. Patent No. 4,709,320, and the knowledge of one of ordinary skill in the art, does not render the '829 Patent obvious.

#### **b) Secondary Considerations**

As indicated above, one of the *Graham* factors that must be considered in an obviousness analysis, is "objective evidence of nonobviousness," also called "secondary considerations." *See Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1536 (Fed. Cir. 1983) ("Thus evidence arising out of the so-called 'secondary considerations' must always when present be considered en route

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to a determination of obviousness.”). However, secondary considerations, such as commercial success, will not always dislodge a determination of obviousness based on analysis of the prior art. *See KSR Int’l*, 127 S.Ct. at 1745 (commercial success did not alter conclusion of obviousness).

In its reply brief, IBM sets forth a detailed outline and analysis of secondary considerations of nonobviousness. (*See generally* CRB at 63-66.) However, as noted *supra*, IBM never addressed the validity of the ‘829 Patent in its initial post-hearing brief, including obviousness. The ALJ finds that pursuant to Ground Rule 11.1, IBM has waived this issue. Unlike IBM’s responses to ASUS’s assertions of anticipation which were permitted, IBM has raised this issue for the first time in its post-hearing reply brief thereby depriving ASUS of the opportunity to respond to IBM’s assertions of secondary considerations. As such, the ALJ finds that IBM has waived any opportunity to raise secondary considerations of nonobviousness for the ‘829 Patent.

Furthermore, since the ALJ finds that ASUS has not even shown, by clear and convincing evidence, a *prima facie* case of obviousness. Thus, the burden never shifted to IBM to set forth a *prima facie* case of nonobviousness and there is no reason for the ALJ to address secondary considerations.

## **2. The ‘741 Patent**

### **a) Analysis of the Asserted Claims**

ASUS argues that claim 1 of the ‘741 Patent is obvious under 35 U.S.C. §103 in view of Japanese Unexamined Patent Application No. 58-99821 to Suzuki (“the Suzuki reference”) in combination with United States Patent No. 4,656,553 to Brown (“the Brown reference”). (RIB at 82.) The Suzuki reference was published on June 14, 1983. (*See* RX-049 (certified English

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translation).) The Suzuki reference was considered by the patent examiner during the prosecution of the '741 Patent thus making ASUS' burden of proving obviousness "especially difficult." *Glaxo Group Ltd.*, 376 F.3d at 1348. Because the Suzuki reference was published before the effective filing date of the '741 Patent, the Suzuki reference constitutes prior art. (*See* RX-049; see also JX-1.) The Brown reference was issued on April 7, 1987. (RX-032.) The Brown reference was not considered by the patent examiner during the prosecution of the '741 Patent. Because the Brown reference was published prior to the effective filing date of the '741 Patent, the Brown reference is prior art.

ASUS argues that the Suzuki reference renders claim 1 of the '741 Patent obvious in view of the Brown reference, but only under IBM's proposed claim construction of the limitation "obtaining a predetermined cooling requirement." (*See* RIB at 82; RX-26 (Stevenson Wit. Stat.) at ¶¶ 237-238.) The Suzuki reference discloses varying a fan based on the current temperature of the component to be cooled and the obtained predetermined temperature values for each module. (*See* RIB at 83.) Suzuki also discloses that the temperature of the component to be cooled is obtained by a temperature sensor. (*Id.*; see also RX-26 (Stevenson Wit. Stat.) at ¶ 239 ("obtaining a predetermined temperature threshold value from a temperature sensor . . . satisfies the 'obtaining' limitation as construed by IBM.")) With regard to the Brown reference, ASUS only argues that in view of Brown it would have been obvious to implement the fan control functionality of Suzuki using a computer. (RIB at 83.)

The limitation "obtaining a predetermined cooling requirement" has been construed herein to mean "getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor." However, as discussed above, the evidence of

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record shows that a temperature sensor is required by Suzuki to determine the cooling level used to vary the fan. Additionally, the evidence shows that the cooling level is based on the current temperature of the component being cooled. Therefore, the ALJ finds that ASUS has failed to prove by clear and convincing evidence that the Suzuki reference in view of the Brown reference discloses the step of “obtaining a predetermined cooling requirement.” Accordingly, the ALJ finds that claim 1 of the ‘741 Patent is not obvious in light of the Suzuki reference in combination with the Brown reference.

#### **D. Written Description**

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

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 make and use the same ...

(emphasis added.)

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.* (quoting *Regents of Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1573 (Fed.Cir.1997)); *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,

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figures, diagrams, formulas, etc.” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed.Cir.1997) (emphasis added).

ASUS argues that the ‘741 Patent is invalid for lack of sufficient written description. (RIB at 85.) ASUS’s argument in support of its assertion that the ‘741 Patent lacks a sufficient written description is based on IBM’s proposed claim constructions. (*Id.*) In particular, ASUS’s argument is premised on the fact that the limitation “obtaining a predetermined cooling requirement” is construed to allow the use of temperature sensors and current temperature information to vary the rate of the claimed variable rate fan cooling unit. (*Id.* at 86.) However, as construed herein, the limitation “obtaining a predetermined cooling requirement” has been held to mean “getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor.” (*Supra* at IV.D.) Because the claim construction that underpins ASUS’ argument has not been adopted, ASUS’s argument lacks support and thus is found to be without merit. Accordingly, the ALJ finds that ASUS has failed to prove by clear and convincing evidence that the ‘741 Patent is invalid for failure to satisfy the written description requirement.

#### **E. Enablement**

Section 112, ¶ 1 of Title 35 requires that the specification describe the manner and process of making and using the invention “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.”

The issue of whether a disclosure is enabling is a matter of law. *Applied Materials, Inc. v. Advanced Semiconductor Materials America, Inc.*, 98 F.3d 1563, 1575 (Fed. Cir. 1996). “To be

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enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without ‘undue experimentation.’” *Genentech, Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997). “Patent protection is granted in return for an enabling disclosure of an invention, not for vague, intimations of general ideas that may or may not be workable.” *Id.* at 1366. Although a specification need not disclose minor details that are well known in the art, “[i]t is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement,” and in so doing the specification cannot merely provide “only a starting point, a direction for further research.” *Id.* On the other hand, “[i]t is not fatal if some experimentation is needed, for the patent document is not intended to be a production specification.” *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 941 (Fed. Cir. 1990). “Undue experimentation” is “a matter of degree” and “not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed ....” *PPG Industries, Inc. v. Guardian Industries Corp.*, 75 F.3d 1558, 1564 (Fed. Cir. 1996).

It is well-settled that in order to be enabling under Section 112, “the patent must contain a description sufficient to enable one skilled in the art to make and use the full scope of the claimed invention.” *United States v. Teletronics, Inc.*, 857 F.2d 778, 785 (Fed. Cir. 1988); *see also Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200, 1213 (Fed. Cir. 1991) (inventor’s disclosure must be “sufficient to enable one skilled in the art to carry out the invention commensurate with the scope of his claims”). Section 112 requires that the scope of

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the claims must bear a reasonable correlation to the scope of enablement provided by the specification to such persons. *Application of Fischer*, 427 F.2d 833, 839 (C.C.P.A. 1970).

ASUS argues that the '741 Patent is invalid because it fails to enable one of skill in the art to practice the claimed invention without undue experimentation. (RIB at 86.) ASUS's argument in support of its assertion that the '741 Patent does not satisfy the enablement requirement is based on IBM's proposed claim constructions. (*Id.* at 87.) In particular, ASUS's argument is premised on the fact that the limitation "obtaining a predetermined cooling requirement" is construed to allow the use of temperature sensors and current temperature information to vary the rate of the claimed variable rate fan cooling unit. (*Id.*) However, as construed herein, the limitation "obtaining a predetermined cooling requirement" has been held to mean "getting or acquiring a previously decided cooling level for at least one of the components that is not based on the current temperature of that component, nor gotten or acquired through the use of a temperature sensor." (*Supra* at Section IV.D.) Because the claim construction that underpins ASUS's argument has not been adopted, ASUS's argument lacks support and thus is found to be without merit. Accordingly, the ALJe finds that ASUS has failed to prove by clear and convincing evidence that the '741 Patent is invalid for failure to satisfy the enablement requirement.

## VII. PATENT EXHAUSTION

ASUS did not address patent exhaustion of the '852 Patent in its Initial Post-hearing Brief and have, therefore, waived any arguments with regard to this affirmative defense. (*See generally* RIB at 115-124.) Therefore, pursuant to Ground Rule 11.1, Respondents have waived any arguments relating to indefiniteness.



## VIII. LICENSING

ASUS argues that it has a license to practice the asserted claims of the '852 Patent under the General Public License.

### A. Applicable Law

Selling or importing a licensed product can not result in infringement of a licensed patent. *See* 35 U.S.C. §271(a) (“whoever *without authority* makes, uses, offers to sell or sells any patented invention, within the United States or imports into the United States any patented invention ... infringes the patent) (emphasis supplied). The Supreme Court long ago recognized that a license is a complete defense to a claim of infringement. *See De Forest Radio Tel. & Tel. Co. v. United States*, 273 U.S. 236, 241 (1927). A license is also a complete defense in a Section 337 Investigation. *See Certain Cardiac Pacemakers and Components Thereof*, ITC Inv. No. 337-TA-162, 1984 WL 273841, at \*10 (May 23, 1984) (“Teletronics’ motion for termination of the Investigation relative to Teletronics for infringement of the ‘242 patent is hereby granted because a valid license is an absolute defense to patent infringement.”) The burden of proof lies on the accused infringer to prove an implied license. *Bandag, Inc. v. Al Bolser’s Tire Stores, Inc.*, 750 F.2d 903, 924 (Fed. Cir. 1984).

### B. GPL License

ASUS argues that it has a license to practice the asserted claims of the '852 patent via the General Public License (“GPL”). (RIB at 122.) The GPL is a software license designed to promote “free software.” The GPL’s authors stated, “we have made it clear that *any patent must be licensed for everyone’s free use or not licensed at all.*” (RIB at 122.) Under this provision, a company that participates in the GPL by distributing or modifying a free software program

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consents to royalty-free redistribution of that program. (RIB at 122-123.) A company that does not, or cannot, consent to royalty-free redistribution must not participate in the GPL.

ASUS argues that IBM's own corporate documents and corporate representative have confirmed that this is the effect of the GPL. (RIB at 123.) As such, ASUS argues that IBM has consented that the iptables and netfilter programs are available for royalty-free use by any taker under the GPL. ASUS states that it participates in GPL licensing of iptables and netfilter and incorporates those programs into all but two of the Accused Routers. (RIB at 123.) ASUS further argues that the very code relied on by IBM in alleged support of its infringement case states in its header that the code is netfilter code "Licensed under the GNU General Public License." (RIB at 123.) Nevertheless, IBM apparently believes it can assert patent rights over ASUS's use of this code—despite the fact that it is open source code, used by ASUS under the same license IBM itself consented to. (RIB at 123.) ASUS argues that, as such, to the extent either iptables or netfilter practices any valid claim of the '852 patent, ASUS has an implied license to practice those claims pursuant to the GPL. (RIB at 124.) Staff agrees. (SIB at 64.)

IBM argues that the '852 Patent does not claim GPL or Linux kernel source code or any source code for that matter. (CRB at 44.) IBM argues that its infringement assertions are based on source code outside of the Linux kernel and on noncode hardware and network system elements. (CRB at 44.) IBM argues that ASUS's source code is outside the Linux kernel and were written independently of the netfilter and iptables so they cannot be considered derivative works under the GPL. (CRB at 44.) That ASUS's source code is outside of the GPL is further supported by ASUS's actions in this investigation, such as seeking to protect and maintain the confidentiality of its source code and additional source code files that it does not distribute under

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the GPL. (CRB at 44-45.) IBM further argues that the noncode hardware and network system elements are not related to open source code and therefore outside of the GPL. (CRB at 45.)<sup>20</sup>

The ALJ finds that to the extent that ASUS incorporates open source programs, namely iptables and/or netfilters, in its Accused Routers, ASUS has an implied license under GPL and IBM's infringement claims under the '852 Patent are barred to that extent. The GPL explains in detail the terms of its license, especially the ability to freely obtain, modify and redistribute any software under said license. (RX-294 and RX-295.) The evidence shows that IBM is a licensee under the GPL to iptables and netfilters and that these are also part of the Linux kernel. (JX-16C at 79:10-15; JX-33 at 47:5-48:11,60:22-61:12; RX-597.) Under the GPL, IBM licensed others to use, modify or distribute iptables and the Linux kernel pursuant to the GPL. (JX-33 at 60:22-61:12, 85:6-93:7.) [REDACTED]

[REDACTED]. Indeed, the source code itself specifically states that it is licensed under the GPL: the first four lines of the ASUS WI-330GE WLAN shows the author and that the open source code is licensed under the GPL ("Licensed under the GNU General Public License"). (RX-352 at ASUS\_SC027378; RX-24C at 145-146). A similar statement is contained in other Accused Routers clearly indicating that the underlying source code for the products is licensed under the GPL. (RX-24C at 147-149, 152-53; RPX-36 .) As such, ASUS is licensed under the GPL to freely use and modify such source code without any further restrictions. (RX-295 at §§ 6,7.)

IBM argues that it is asserting its rights against source code outside of the Linux kernel that was developed by ASUS to enable the routing function. IBM, however, never addressed this issue in its initial post-hearing brief and raises it for the first time in its post-hearing reply brief

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<sup>20</sup> ASUS argues that since IBM failed to address the licensing defense in its Initial Post-hearing brief, it has therefore waived any dispute regarding the issue per Ground Rule 11.1. Consistent with the ALJ's prior rulings, however, he is permitting IBM to respond to ASUS's licensing arguments.

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thereby depriving ASUS of the opportunity to respond to IBM's assertions. Moreover, the GPL specifically allows for the modification of programs under the GPL, including in this instance the Linux kernel. (RX-295.) Indeed, the evidence shows that the source code relied upon by IBM clearly and specifically states that it is licensed under the GPL. As such, the ALJ finds that IBM is bound by its agreement under the GPL and is, therefore, barred from its infringement claims under the '852 Patent against those accused products that contain this open source code.

### **IX. DOMESTIC INDUSTRY**

As stated in the notice of investigation, a determination must be made as to whether an industry in the United States exists as required by subsection (a)(2) of section 337. Section 337 declares unlawful the importation, the sale for importation or the sale in the United States after importation of articles that infringe a valid and enforceable U.S. patent only if an industry in the United States, relating to articles protected by the patent . . . concerned, exists or is in the process of being established. There is no requirement that the domestic industry be based on the same claim or claims alleged to be infringed. 19 U.S.C. § 1337(a)(2).

The domestic industry requirement consists of both an economic prong (*i.e.*, there must be an industry in the United States) and a technical prong (*i.e.*, that industry must relate to articles protected by the patent at issue). *See Certain Ammonium Octamolybdate Isomers*, Inv. No. 337-TA-477, Comm'n Op. at 55, USITC Pub. 3668 (Jan. 2004). The complainant bears the burden of proving the existence of a domestic industry. *Certain Methods of Making Carbonated Candy Products*, Inv. No. 337-TA-292, Comm'n Op. at 34-35, USITC Pub. 2390 (June 1991).

Thus, in this investigation IBM must show that it satisfies both the technical and economic prongs of the domestic industry requirement with respect to the '852, the '829 and the

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'741 Patents. As noted, and as explained below, it is found that these domestic industry requirements have been satisfied.

A complainant in a patent-based Section 337 investigation must demonstrate that it is practicing or exploiting the patents at issue. See 19 U.S.C. § 1337(a)(2) and (3); also see *Certain Microsphere Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Commission Opinion at 8, 1996 WL 1056095 (U.S.I.T.C., January 16, 1996) ("*Certain Microsphere Adhesives*"), *aff'd sub nom. Minnesota Mining & Mfg. Co. v. U.S. Int'l Trade Comm'n*, 91 F.3d 171 (Fed. Cir. 1996) (Table); *Certain Encapsulated Circuits*, Commission Opinion at 16. The complainant, however, is not required to show that it practices any of the claims asserted to be infringed, as long as it can 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, 2005 ITC LEXIS 374, \*26 (April 11, 2005). Fulfillment of this so-called "technical prong" of the domestic industry requirement is not determined by a rigid formula, but rather by the articles of commerce and the realities of the marketplace. *Certain Diltiazem Hydrochloride and Diltiazem Preparations*, Inv. No. 337-TA-349, U.S.I.T.C. Pub. No. 2902, Initial Determination at 138, 1995 WL 945191 (U.S.I.T.C., February 1, 1995) (unreviewed in relevant part) ("*Certain Diltiazem*"); *Certain Double-Sided Floppy Disk Drives and Components Thereof*, Inv. No. 337-TA-215, 227 U.S.P.Q. 982, 989 (Commission Opinion 1985) ("*Certain Floppy Disk Drives*").

The test for claim coverage for the purposes of the technical prong of the domestic industry requirement is the same as that for infringement. *Certain Doxorubicin and Preparations Containing Same*, Inv. No. 337-TA-300, Initial Determination at 109, 1990 WL 710463 (U.S.I.T.C., May 21, 1990) ("*Certain Doxorubicin*"), *aff'd*, Views of the Commission at

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22 (October 31, 1990). “First, the claims of the patent are construed. Second, the complainant’s article or process is examined to determine whether it falls within the scope of the claims.” (*Id.*) As with infringement, the first step of claim construction is a question of law, whereas the second step of comparing the article to the claims is a factual determination. *Markman*, 52 F.3d at 976. 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, 1999 ITC LEXIS 245, \*7 (July 30, 1999). The patentee must establish by a preponderance of the evidence that the domestic product practices one or more claims of the patent. *See Bayer*, 212 F.3d at 1247.

The economic prong of the domestic industry requirement is defined in subsection 337(a)(3) as follows:

(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 or mask work 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.

19 U.S.C. § 1337(a)(3).

The economic prong of the domestic industry requirement is satisfied by meeting the criteria of any one of the three factors listed above.

Section 337(a)(3)(C) provides for domestic industry based on “substantial investment” in the enumerated activities, including licensing of a patent. *See Certain Digital Processors and Digital Processing Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-559, Initial Determination at 88 (May 11, 2007) (“*Certain Digital Processors*”). Mere

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ownership of the patent is insufficient to satisfy the domestic industry requirement. *Certain Digital Processors* at 93. (Citing the Senate and House Reports on the Omnibus Trade and Competitiveness Act of 1988, S.Rep. No. 71. However, entities that are actively engaged in licensing their patents in the United States can meet the domestic industry requirement. *Certain Digital Processors* at 93. In establishing a domestic industry under Section 337(a)(3)(C), the complainant does not need to show that it or one of its licensees is practicing a patent-in-suit. *See Certain Semiconductor Chips with Minimized Chip Package Size and Products Containing Same*, Inv. No. 337-TA-432, Order No. 13, at 11, (Jan. 24, 2001) (“*Certain Semiconductor Chips*”). The complainant must, however, receive revenue, e.g. royalty payments, from its licensing activities. *Certain Digital Processors*, at 93-95 (“Commission decisions also reflect the fact that a complainant’s receipt of royalties is an important factor in determining whether the domestic industry requirement is satisfied...[t]here is no Commission precedent for the establishment of a domestic industry based on licensing in which a complainant did not receive any revenue from alleged licensing activities. In fact, in previous investigations in which a complainant successfully relied solely on licensing activities to satisfy section 337(a)(3), the complainant had licenses yielding royalty payments.”) (citations omitted). *See also Certain Video Graphics Display Controllers and Products Containing Same*, Inv. No. 337-TA-412, Initial Determination at 13 (May 14, 1999) (“*Certain Video Graphics Display Controllers*”); *Certain Integrated Circuit Telecommunication Chips and Products Containing Same Including Dialing Apparatus*, Inv. No. 337-TA-337, U.S.I.T.C. Pub. No. 2670, Initial Determination at 98 (March 3, 1993) (“*Certain Integrated Circuit Telecommunication Chips*”); *Certain Zero-Mercury-Added Alkaline Batteries, Parts Thereof and Products Containing Same*, Inv. No. 337-TA-493, Initial Determination at 142 (June 2, 2004) (“*Certain Zero-Mercury-Added Alkaline*

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*Batteries*"); *Certain Semiconductor Chips*, Order No. 13 at 6 (Jan. 24, 2001); *Certain Digital Satellite System DSS Receivers and Components Thereof*, Inv. No. 337-TA-392, Initial and Recommended Determinations at 11 (Dec. 4, 1997) ("*Certain Digital Satellite System DSS Receivers*").

IBM argues that it has made substantial investments in its licensing program and that there is a sufficient nexus between its licensing activities and the patents at issue. (CIB at 119.) IBM argues that it employs a number of patent engineers, licensing representative and intellectual property attorneys in its licensing program; that these employees are located in offices throughout the United States; and that they are compensated for their work. (CIB at 119-121.) IBM further argues that as part of its licensing program, it uses "proof packages," which is a point by point demonstration that the subject company's product offerings infringe a specific claim of an IBM patent. (CIB at 122.) These proof packages require a significant amount of work and coordination between IBM's licensing personnel, patent engineering personnel and its legal department and are a time consuming process taking up to six months. (CIB at 122-124.) IBM further argues that it has obtained a number of licenses and revenue from the patents at issue. (CIB at 124-125.) Staff agrees. (SIB at 64-65.)

ASUS argues that there an insufficient nexus between IBM's licensing activities and the patents at issue. (RIB at 124.) ASUS argues that there is no basis to attribute more than a miniscule fraction of IBM's investment in licensing activities to the patents at issue and takes issue with IBM's proof packages as evidence that the licenses entered into with IBM were a result of those proof packages and the patents discussed in those proof packages, including the patents at issue. (RIB at 124-125.)



[REDACTED]


The evidence shows that IBM has met the domestic industry requirement based on its licensing activities. IBM generates income and revenue from its licensing activities, estimated to be about [REDACTED]. (CX-2050C at Q40.) IBM currently employs approximately [REDACTED] patent engineers, licensing representatives and intellectual property attorneys that are located in IBM's offices throughout the United States in Armonk, New York; Hopewell Junction, New York and Raleigh, North Carolina. (CX-2050C at Q41, 61.) These [REDACTED] employees are involved in IBM's licensing related activities and received compensation in 2007 totaling [REDACTED] and a projected [REDACTED] in 2008. (CX-2050C at 52, 58; CX-2068C.)

As for each specific asserted patent, the ALJ further finds that there is a sufficient nexus between IBM's licensing activities and the patents at issue. Specifically, IBM has entered into [REDACTED] license agreements that feature the '852 Patent and these agreements generate over [REDACTED] in revenue. (CX-2050C at Q117-198; CX2085C-2094C.) IBM has entered into at least [REDACTED] license agreements that feature the '829 Patent and these license agreements generate over [REDACTED] million in revenue. (Huston, Tr. at 208:12-16, 209:15-19; CX-2050C at Q 200-255; CX-2084C; CX-2097C; CX-2098C; CX-2100C-2104C; CX-2106C-CX2107C.) The '741 Patent is also featured in a license agreement that is projected to generate over [REDACTED] million in revenue for IBM and there are currently three prospective licensees for this patent. (Huston, Tr. 209:25-210:3; CX-2050C at Q288-291; CX-2084C.) Therefore, the ALJ finds that IBM has satisfied the domestic industry requirement under 337(a)(3)(C) with respect to each of the asserted patents.



## X. CONCLUSIONS OF LAW

1. The Commission has personal jurisdiction over the parties, and subject-matter jurisdiction over the accused products.
2. The importation or sale requirement of section 337 is satisfied.
3. The accused products do not literally infringe the asserted claims of the '852 Patent.
4. The accused products do not literally infringe the asserted claims of the '829 Patent.
5. The accused products do not literally infringe the asserted claims of the '741 Patent.
6. The accused products do not infringe the asserted claims of the '852 Patent under the doctrine of equivalents.
7. The accused products do not infringe the asserted claims of the '829 Patent under the doctrine of equivalents.
8. The accused products do not infringe the asserted claims of the '741 Patent under the doctrine of equivalents.
9. ASUS does not induce infringement of the '852 Patent.
10. ASUS does not induce infringement of the '829 Patent.
11. ASUS does not induce infringement of the '741 Patent.
12. ASUS does not contribute to the infringement of the '829 Patent.
13. ASUS does not contribute to the infringement of the '741 Patent.
14. The asserted claims of the '852 Patent are not invalid under 35 U.S.C. § 102 for anticipation.
15. The asserted claims of the '829 Patent are not invalid under 35 U.S.C. § 102 for anticipation.

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16. The asserted claims of the '741 Patent are not invalid under 35 U.S.C. § 102 for anticipation.
  17. The asserted claims of the '829 Patent are not invalid under 35 U.S.C. § 103 for obviousness.
  18. The asserted claims of the '741 Patent are not invalid under 35 U.S.C. § 103 for obviousness.
  19. The asserted claims of the '741 Patent satisfy the written description requirement of 35 U.S.C. § 112 ¶ 1.
  20. The asserted claims of the '741 Patent satisfy the enablement requirement of 35 U.S.C. § 112 ¶ 1.
  21. The open source code in the Accused Routers are licensed to the '852 Patent under the GPL.
  22. A domestic industry exists, as required by section 337 for the '852, the '829 and the '741 Patents.
  23. It has not been established that a violation exists of section 337.

[REDACTED]

## XI. INITIAL DETERMINATION AND ORDER

Based on the foregoing, it is the INITIAL DETERMINATION ("ID") of this ALJ that no violation of section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain computer products, components and products containing same by reason of infringement of one or more of claims 1,8, 13, 14, 22 and 23 of United States Patent No. 5,371,852; claims 1 and 2 of U.S. Patent No. 5,008,829; and claim 1 of U.S. Patent No. 5,249,741 . The ALJ further determines that a domestic industry exists that practices U.S. Patent Nos. 5,371,852. 5,008,829 and 5,249,741.

Further, this Initial Determination, together with the record of the hearing in this investigation consisting of:

- (1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and
- (2) the exhibits received into evidence in this investigation, as listed in the attached exhibit lists in Appendix A,

are CERTIFIED to the Commission. In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

The Secretary shall serve a public version of this ID upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order (Order No. 1.) issued in this investigation, and upon the Commission investigative attorney.

[REDACTED]

## RECOMMENDED DETERMINATION ON REMEDY AND BOND

### I. Remedy and Bonding

The Commission's Rules provide that subsequent to an initial determination on the question of violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, the administrative law judge shall issue a recommended determination containing findings of fact and recommendations concerning: (1) the appropriate remedy in the event that the Commission finds a violation of section 337, and (2) the amount of bond to be posted by respondents during Presidential review of Commission action under section 337(j). *See* 19 C.F.R. § 210.42(a)(1)(ii).

#### A. Limited Exclusion Order

Under Section 337(d), the Commission may issue either a limited or a general exclusion order. A limited exclusion order directed to respondents' infringing products is among the remedies that the Commission may impose, as is a general exclusion order that would apply to all infringing products, regardless of their manufacturer. *See* 19 U.S.C. § 1337(d).

IBM requests that, should the Commission find a violation, a limited exclusion order should be issued that prohibits the importation of all infringing accused products by ASUS and all of their affiliated companies, parents, subsidiaries, or other related business entities of their successors or assigns. (CIB at 125.) IBM further argues that given the vast size of ASUS's OEM/ODM business, a certification provision should be included requiring importers of potentially excluded products to certify that the products are not manufactured by ASUS. (CIB at 125.) Staff agrees. (SIB at 66.)

ASUS argues that IBM is not entitled to an exclusion order covering ASUS's downstream products as IBM has failed to establish which ASUS products, if any, incorporate

[REDACTED]

the accused products and failed to establish the relative value of the accused products compare to the downstream products. (RIB at 126-127.) ASUS further argues that IBM is not entitled to an exclusion order that covers transshipments. (RIB at 127.) ASUS argues that IBM is not entitled to an exclusion order that covers the accused products because IBM has based its infringement case on a theory of indirect infringement. ASUS argues that since the products cannot infringe until an end user programs or enables the products after importation. (RIB at 127-128.).

The ALJ agrees that the evidence shows that, if a violation is found, the Commission should issue a limited exclusion order. The limited exclusion order should apply to ASUS and all of their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns and should be limited to the accused infringing products. The ALJ further recommends that the limited exclusion order include a certification provision.

#### **B. Cease and Desist Order**

Section 337 provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a cease and desist order as a remedy for violation of section 337. *See* 19 U.S.C. § 1337(f)(1). The Commission generally issues a cease and desist order directed to a domestic respondent when there is a “commercially significant” amount of infringing, imported product in the United States that could be sold so as to undercut the remedy provided by an exclusion order. *See Certain Crystalline Cefadroxil Monohydrate*, Inv. No. 337-TA-293, USITC Pub. 2391, Comm’n Op. on Remedy, the Public Interest and Bonding at 37-42 (June 1991); *Certain Condensers, Parts Thereof and Products Containing Same, Including Air Conditioners for Automobiles*, Inv. No. 337-TA-334, Comm’n Op. at 26-28 (Aug. 27, 1997).

IBM requests a cease and desist order against domestic respondent ASUS Computer International based in the United States as it maintains significant inventories of the infringing

[REDACTED]

products in the United States. (CIB at 126.) IBM further seeks a cease and desist order against both ASUSTeK and ASUS Computer International that would encompass their Internet activities to the extent that the websites accept or facilitate sales orders and provide information on the infringing products. (CIB at 126.) Staff agrees. (SIB at 66.)

ASUS argues that IBM has failed to demonstrate that ASUS has a commercially significant U.S. inventory of the accused products and that a cease and desist order is unwarranted. (RIB at 128.)

The ALJ agrees that the evidence shows that ASUS maintains significant inventories of the accused products in the United States and that, if a violation is found, a cease and desist order is warranted. (CX-2169-CX-2172; CX-2022C)

### **C. Bond During Presidential Review Period**

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 issue a remedy. The purpose of the bond is to protect the complainant from any injury. 19 C.F.R. § 210.42(a)(1)(ii), § 210.50(a)(3).

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. a 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.

[REDACTED]

337-TA-337, Comm'n Op. at 41 (1995). A 100 percent bond has been required when no effective alternative existed. *See, e.g., 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).

IBM requests a bond be set in the amount of 100% of the entered value of accused products because the direct price comparison between the parties' respective products is not clear or not possible. (CIB at 126-127.) ASUS argues that since IBM has failed to provide any evidence that could be used to determine the appropriate bond amount, then no bond should be set or the bond should not exceed 3%. (RIB at 128-129.) Staff agrees that the bond should be set at 100% of the entered value of accused infringing products. (SIB at 66.)

In this case, a reasonable royalty rate cannot be ascertained. Accordingly, the ALJ recommends a bond in the amount of 100% of the entered value of the infringing products.

## **II. Conclusion**

In accordance with the discussion of the issues contained herein, it is the RECOMMENDED DETERMINATION ("RD") of the ALJ that in the event the Commission finds a violation of section 337, the Commission should issue a limited exclusion order directed at ASUS's accused infringing products. The Commission should also issue a cease and desist order directed toward the domestic respondents ASUSTeK and ASUS Computer International that prohibits the sale of any commercially significant quantities of the accused products. Furthermore, if the Commission imposes a remedy following a finding of violation, ASUS





should be required to post a bond of 100% of the entered value of the accused products during the Presidential review period.

Within seven 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.

Any party seeking to have any portion of this document deleted from the public version thereof must submit to this office a copy of this document with red brackets indicating any portion asserted to contain confidential business information by the aforementioned date. The parties' submission concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.

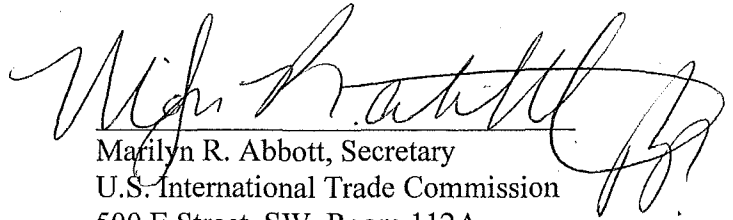
Theodore R. Essex  
Administrative Law Judge

**IN THE MATTER OF CERTAIN COMPUTER PRODUCTS,  
COMPUTER COMPONENTS AND PRODUCTS CONTAINING  
SAME**

**Inv. No. 337-TA-628**

**PUBLIC CERTIFICATE OF SERVICE**

I, Marilyn R. Abbott, hereby certify that the attached **INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND RECOMMENDED DETERMINATION ON REMEDY AND BOND** has been served by hand upon the Commission Investigative Attorney, **Vu Q. Bui, Esq.**, and the following parties as indicated on April 13, 2009.

  
Marilyn R. Abbott, Secretary  
U.S. International Trade Commission  
500 E Street, SW, Room 112A  
Washington, D.C. 20436

**COMPLAINANT INTERNATIONAL BUSINESS MACHINES:**

V. James Adduci II, Esq.

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 Via First Class Mail  
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**RESPONDENTS ASUSTeK COMPUTER, INC. and  
ASUS COMPUTER INTERNATIONAL, NON-NCS TECHNOLOGIES INC :**

Brian R Nester, Esq.

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**IN THE MATTER OF CERTAIN COMPUTER PRODUCTS,  
COMPUTER COMPONENTS AND PRODUCTS CONTAINING  
SAME**

**Inv. No. 337-TA-628**

**CERTIFICATE OF SERVICE - PAGE 2**

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