In the Matter of

Certain Switches and Products Containing Same

Investigation No. 337-TA-589

Publication 4122 **March 2010**

U.S. International Trade Commission

Washington, DC 20436

U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION
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In the Matter of CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME	Investigation No. 337-TA-589

NOTICE OF COMMISSION DETERMINATION OF NO VIOLATION OF SECTION 337; TERMINATION OF THE INVESTIGATION

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined that there is no violation of 19 U.S.C. § 1337 by respondents Belkin International, Inc., Belkin, Inc., and Emine Technology Co., Ltd. in the above-referenced investigation.

FOR FURTHER INFORMATION CONTACT: Michelle Walters, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 708-5468. 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: This investigation was instituted on December 7, 2006, based on a complaint filed by ATEN International Co., Ltd. of Taipei, Taiwan, and ATEN Technology, Inc. of Irvine, California (collectively, "ATEN"). The complaint alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain switches and products containing the same by reason of infringement of various claims of United States Patent No. 7,035,112. The complaint named six respondents: Belkin International, Inc., Belkin, Inc. (collectively, "Belkin"), Emine Technology Co., Ltd. ("Emine"), RATOC Systems, Inc., RATOC Systems International, Inc. (collectively, "RATOC"), and JustCom Tech, Inc.

("JustCom"). The Commission has terminated the investigation with respect to RATOC and JustCom based on settlement agreements, including a consent order.

On November 7, 2007, the ALJ issued his final initial determination ("ID"), and on November 21, 2007, he issued his recommended determination on remedy and bonding. In his ID, the ALJ found that Belkin's and Emine's accused products do not infringe asserted claims 1 and 12-21. In addition, the ALJ found that the claims are not invalid for anticipation or obviousness. The ALJ also found that the claims are not invalid for lack of written description support and that the patent is not unenforceable for inequitable conduct. Further, the ALJ found that there was no domestic industry based on the asserted patent. ATEN, Belkin, Emine, and the Commission investigative attorney each filed petitions for review of the ALJ's ID and responses to the petitions. The Commission determined to review a portion of the ALJ's ID and requested briefing from the parties on the issues under review and on remedy, the public interest, and bonding.

Having examined the record of this investigation, including the ALJ's final ID, the written submissions on review, and the responses thereto, the Commission has determined (1) to modify the ALJ's claim construction of the term "body;" (2) to adopt the ALJ's claim construction of the terms "fixedly attached" and "integrated into;" (3) to determine that Belkin's and Emine's products do not infringe the asserted claims under the adopted claim construction; and (4) to determine that, alternatively, if a broad claim construction were adopted for the term "body," the claims would be invalid for anticipation or obviousness in light of the asserted prior art.

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 210.45 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.45).

By order of the Commission.

Marilyn R. Abbott
Secretary to the Commission

Issued: February 8, 2008

CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME **337-TA-589**

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **NOTICE OF COMMISSION DETERMINATION OF NO VIOLATION OF SECTION 337; TERMINATION OF THE INVESTIGATION** has been served by hand upon the Commission Investigative Attorney, Anne Goalwin, Esq., and Heidi E. Strain, Esq., the following parties as indicated, on February 8, 2008.

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PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME**	**Investigation No. 337-TA-589**

COMMISSION OPINION

On February 7, 2008, the United States International Trade Commission (the "Commission") issued a notice in the above-referenced investigation of its determination that respondents Belkin International, Inc., Belkin, Inc. (collectively, "Belkin"), and Emine Technology Co., Ltd. ("Emine") did not violate section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337). This opinion sets forth the reasons for the Commission's determination. The Commission adopts the findings of fact and conclusions of law in the presiding administrative law judge's ("ALJ") final initial determination ("ID") to the extent they are not inconsistent with this opinion.

I. BACKGROUND

A. Procedural History

The Commission instituted this investigation on December 7, 2006, based on a complaint filed by ATEN International Co., Ltd. and ATEN Technology, Inc. (collectively, "ATEN"). The complaint alleged violations of section 337 in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain switches and

products containing the same by reason of infringement of claims 1 and 12-21 of United States Patent No. 7,035,112 (the "'112 patent"). The complaint named three respondents besides Belkin and Emine: RATOC Systems, Inc., RATOC Systems International, Inc. (collectively, "RATOC"), and JustCom Tech, Inc. ("JustCom"). On January 18, 2008, the Commission terminated the investigation with respect to RATOC and JustCom based on settlement agreements, including a consent order.

The ALJ held an evidentiary hearing on July 16-20, 2007, and thereafter received briefing from the parties. On November 7, 2007, the ALJ issued his final ID, and on November 21, 2007, he issued his recommended determination on remedy and bonding. In his ID, the ALJ construed the claims and found that the accused products do not infringe claims 1 and 12-21. ID at 39-51. In addition, he found that the claims would be invalid for anticipation or obviousness under certain alternate claim constructions. ID at 53-67. The ALJ also found that the claims are not invalid for lack of written description and that the patent is not unenforceable for inequitable conduct. ID at 68-70. Finally, he found that the domestic industry requirement was not met. ID at 71-74.

On November 19, 2007, ATEN, Belkin, Emine, and the Commission investigative attorney ("IA") each filed petitions for review, challenging the ALJ's determinations. *See* Complainants ATEN International Co., Ltd.'s and ATEN Technology, Inc.'s Petition for Review of the Initial Determination; Respondents Belkin International and Belkin Inc.'s Contingent Petition for Review of the Initial Determination ("Belkin Pet."); Corrected Contingent Petition by Respondent Emine Technology Co. Ltd. for Review of November 7, 2007 Initial Determination ("Emine Pet."); and Petition for Review of the Office of Unfair Import Investigations of the Initial Determination.

The Commission determined to review the ALJ's claim construction of the terms "body," "fixedly attached," and "integrated into," and his determinations on infringement, anticipation, obviousness, and domestic industry. The Commission determined not to review the ALJ's claim construction of the terms "connector plugs," "connector ports," "cable," or "molded attachment element," or his determinations on the level of skill of a person of ordinary skill in the art, written description, or inequitable conduct. The Commission received briefing on the issues on review and on remedy, the public interest, and bonding.

B. Patent at Issue

This investigation pertains to switches. The '112 patent is entitled "Automatic Switch" and is directed to a switch and a method of making a switch. The patent application resulting in the '112 patent was filed on July 8, 2002, and the patent issued on April 25, 2006 to Kevin Chen. It is assigned to ATEN International Co., Ltd. The '112 patent has twenty-three claims, but only eleven claims are asserted in this investigation, claims 1 and 12-21.

C. Products at Issue

All of the accused products are keyboard, video display, and mouse switches ("KVM switches"). These types of switches allow a single keyboard, video display, and mouse to share two or more computers. ATEN accuses numerous switches of infringement. The parties agreed that the accused products can be categorized into six groups, discussed in more detail below.

II. ANALYSIS

A. Claim Construction

Generally, the words of a claim are "given their ordinary and customary meaning," which

is the "meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention . . . ." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313-14 (Fed. Cir. 2005) (*en banc*). Moreover, claims must be read in view of the specification of which they are a part. *Id.* at 1315. In *Phillips*, the Federal Circuit emphasized the importance of the specification, stating that usually the specification is dispositive of claim construction issues and that "it is the single best guide to the meaning of a disputed term." *Id.* In addition, the Court recently reiterated that a patentee may limit a term by implication through the specification. *See On Demand Machine Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1340 (Fed. Cir. 2006).

The Federal Circuit has also held that special rules apply where there is no accepted meaning of a claim term to a person of ordinary skill in the art. For example, in *Irdeto Access, Inc. v. Echostar Satellite Corp.*, the Court stated that "if a disputed term has 'no previous meaning to those of ordinary skill in the prior art[,] its meaning, then must be found [elsewhere] in the patent.'" 383 F.3d 1295, 1300 (Fed. Cir. 2004) (brackets original) (*quoting J.T. Eaton & Co. v. Atl. Paste & Glue Co.*, 106 F.3d 1563, 1570 (Fed. Cir. 1997)). Thus, in these cases, the patent specification takes on particular importance.

There are two independent claims asserted in this investigation, claims 1 and 21:

1. A switch comprising:

a **body**;

a switching circuit contained within the body;

a set of connector ports electrically coupled to the switching circuit; and,

a plurality of cables **fixedly attached** to and extending from the body, each cable in the

plurality of cables having a plurality of connector plugs,

wherein each connector plug in the plurality of connector plugs for one of the cables in the plurality of cables are matched a respective connector plug in another one of the cables in the plurality of cables, and wherein the switching circuit switches to connect each of the set of connector ports to one of the plurality of cables.

'112 patent, col. 3, ll. 19-32 (emphasis added).

21. A method comprising the steps of:

providing a **body**;

enclosing a switching circuit within the body;

integrating a first computer cable and a second computer cable **into** the body, each of the first computer cable and the second computer cable including a first end electrically coupled to the switching circuit and a second end having a plurality of connector plugs, each connector plug in the plurality of connector plugs in the first computer cable being matched to a corresponding one of the plurality of connector plugs in the second computer cable; and,

providing a plurality of connector ports on a surface of the body, the plurality of connector ports electrically coupled to the switching circuit;

wherein the switching circuit electrically switches the plurality of connector ports between the plurality of connector plugs of the first computer cable and the second computer cable.

'112 patent, col. 4, ll. 24-43 (emphasis added).

The ALJ construed seven terms from the asserted claims: (1) "body," (2) "fixedly attached," (3) "connector plugs," (4) "connector ports," (5) "cable," (6) "molded attachment element," and (7) "integrated into." We determined to review three of those terms: "body," "fixedly attached," and "integrated into," which are in bold in the claims above. With respect to the claim constructions that we determined not to review, we stated in our notice that we

understood the ALJ to have adopted the reasoning of the party whose claim construction he adopted, and on that basis we determined not to review.

1. "Body"

The ALJ construed the term "body" to mean "an enclosure that provides good-weather resistence [sic], impact resistence [sic], and absolute protection of the internal circuit board and circuits thereon." ID at 22. Complainant ATEN argues that the term "body" means the "main, central, or principal part" of the switch, excluding the switching circuit. *See* Written Submission of Complainants ATEN International Co., Ltd. and ATEN Technology, Inc. in Response to the Commission's Notice of Determination to Review the Initial Determination ("Comp. Submission") at 2-3 & 27-28. Respondent Belkin argues that the term "body" means an "integrally injection molded enclosure that provides good-weather resistance, impact resistance, and absolute protection of the internal circuit board and circuits thereon." *See* Belkin Respondents' Submission Concerning Issues Under Review, Remedy, the Public Interest and Bonding ("Belkin Submission") at 12. Respondent Emine asserts that the term "body" means "a single integral enclosure that is not assembled from separate parts, such as by the means of screws." *See* Respondent Emine Technology Co. Ltd.'s Submission Regarding Issues on Review and on the Issues of Remedy, the Public Interest, and Bonding ("Emine Submission") at 11. The IA asserts that the claim term "body" means the "main, central, or principal part" of the switch and that it includes the switching circuit. *See* Office of Unfair Import Investigations' Submission in Response to Commission Request for Written Submissions on Issues under Review and on Remedy, the Public Interest, and Bonding at 3 & 8.

We construe the claim term "body" to mean "an enclosure for an internal circuit board." In addition, we conclude that the claimed "body" does not include the prior art box disclosed in the Background of the Invention section of the '112 patent specification.[1] We find it unnecessary to reach the issues of whether the specification limits the term "body" to an enclosure that is injection-molded, singular, or integral or whether the claimed "body" includes the switching circuit.

Our analysis begins with the claims themselves. Independent claim 1 states that a switching circuit is "contained within the body." '112 patent, col. 3, l. 21. Independent claim 21 states that the body "enclos[es] a switching circuit." '112 patent, col. 4, l. 26. Turning to the specification, we see that it describes an automatic switch that "includes a main body . . . enclosing an internal circuit board." '112 patent, col. 1, ll. 39-41. This is consistent with the claims. Based on the language of the claims and the specification, we conclude that the claimed "body" is "an enclosure for an internal circuit board." For the '112 patent claims, the "internal circuit board" comprises a switching circuit. '112 patent, col. 3, ll. 21 & 26.

Respondent Emine raises the question of whether the inventor disavowed the prior art described in the Background of the Invention section of the '112 patent. We find that he did. The specification criticizes the prior art switch for lacking features that are described as advantages of the present invention. In *On Demand Machine Corp. v. Ingram Indus., Inc.*, the Court cited *Astrazeneca AB v. Mutual Pharmaceutical Co.*, 384 F.3d 1333, 1339-40 (Fed. Cir. 2004), for the

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[1] Therefore, insofar as an enclosure contains "outer walls that are made of metal material or rigid plastic material and assembled together by means of screws," it is not a "body" within the meaning

proposition that "[w]here the general summary or description of the invention describes a feature of the invention (here, micelles formed by the solubilizer) and criticizes other products (here, other solubilizers, including co-solvents) that lack the same feature, this operates as a clear disavowal of these other products . . . ." *On Demand Machine Corp. v. Ingram Indus., Inc.*, 384 F.3d 1333, 1340 (Fed. Cir. 2004). Thus, criticizing a prior art device that lacks features described as features of the invention operates as a disavowal, even without an express statement to that effect. Further, the specification takes on particular importance in this case, because the experts acknowledged that there is no accepted meaning of the term "body" in the art.[2] *See* Tr. at 465 (Barker); Tr. at 1135-36 (Min).

In the Background of the Invention, the specification explains:

> Inmost [sic] cases, the box 41 includes outer walls that are made of metal material or rigid plastic material and assembled together by means of screws (not shown). The automatic switch 40 is normally positioned on a host enclosure of a computer configuration and tends to unexpectedly fall off the host enclosure *to result in a damaged circuit board due to vibration*. Moreover, when a high humidity exists, *moisture in the air tends to attach to the circuit board* to cause short circuit. Repair or maintenance of the circuit board is therefore required.

'112 patent, col. 1, ll. 23-32 (emphasis added). In contrast, when introducing the present invention, the Background of the Invention states that "[t]he present invention relates to an automatic switch for a user to automatically switch between two or more computer configurations, and more particularly to an automatic switch that has an integrally injection-molded enclosure to provide

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of the claim term. '112 patent, col. 1, ll. 23-25.

[2] The specification is also particularly important because the general definition of the term "body" is "the main, central, or principal part" – a claim construction proposed by ATEN and the IA, but

good *weather-resistance, impact-resistance, and absolute protection* of an internal circuit board thereof."[3] '112 patent, col. 1, ll. 5-10 (emphasis added); *see also* '112 patent, col. 1, ll. 41-44. The inventor's contrast between the problems and solutions – vibration problems and impact resistance as well as moisture problems and weather resistance – and his description of the solution as a change to the body (from the box), effects a disavowal of the prior art box.

Indeed, the parallel structuring of the Background of the Invention and the Summary of the Invention directly contrast the problems with the prior art with the solution presented by the inventor. They both begin by describing the function of the prior art; then they describe the structure of the prior art; and finally they describe, respectively, the problems with the prior art and the solution presented by the inventor. This structure highlights the comparison and is illustrated in the table below:

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one that provides little guidance to the meaning of the term here. *See* CX-228 (MERRIAM WEBSTER'S COLLEGIATE DICTIONARY at 128 (10th ed. 2001)).

[3] Although the phrase "more particularly" might normally set off a preferred embodiment, in this case the first part of the statement describes the general field, which is well-known in the prior art, and the "more particular" description describes the invention.

	Background of the Invention	Summary of the Invention
Prior Art Function	"For people to access two or more computers at the same time, there is developed an automatic switch to enable a user to automatically switch among different signal paths." '112 patent, col. 1, ll. 16-18.	"A primary object of the present invention is to provide a plug-type automatic switch for a user to access and control multiple computer configurations through one single switch." '112 patent, col. 1, ll. 36-38.
Prior Art Structure	"FIG. 1 shows a conventional automatic switch 40 that is configured into a box 41. The box 41 is internally provided with a circuit board (not shown). Ports 42, 43, and 44 for various types of signal cable connectors are provided on peripheral walls of the box 41." '112 patent, col. 1, ll. 18-23.	"The automatic switch includes a main body externally provided with connector ports and enclosing an internal circuit board." '112 patent, col. 1, ll. 39-41.
Problem/ Solution	"Inmost [sic] cases, the box 41 includes outer walls that are made of metal material or rigid plastic material and assembled together by means of screws (not shown). The automatic switch 40 is normally positioned on a host enclosure of a computer configuration and tends to unexpectedly fall off the host enclosure to result in a damaged circuit board due to vibration. Moreover, when a high humidity exists, moisture in the air tends to attach to the circuit board to cause short circuit. Repair or maintenance of the circuit board is therefore required." '112 patent, col. 1, ll. 23-32.	"The main body has an integrally injection-molded plastic enclosure to provide good weather-resistance, impact-resistance, and absolute protection of the internal circuit board and circuits thereon." '112 patent, col. 1, ll. 41-44.

Accordingly, the specification identifies features of the invention and then criticizes the prior art for lacking those features, and as such, the inventor disavowed coverage of the indicated prior art.[4] *See Astrazeneca AB v. Mutual Pharm. Co.*, 384 F.3d 1333, 1340 (Fed. Cir. 2004).

[4] The fact that the specification only describes one type of prior art, stating that *in most* cases the boxes are made of multiple components held together by screws, simply means that the scope of the exclusion is limited to the prior art boxes actually referred to.

Moreover, the specification states: "In brief, the automatic switch 10 of the present invention uses the main body 20 having cable-connected connector sets 30 to replace the conventional box-type switch 40, enabling the switch 10 to be used in a more convenient manner." '112 patent, col. 3, ll. 9-13. This further suggests that the inventor did not intend for his claims to cover the conventional box-type switch 40.

Finally, the specification employs a different term than "body" to describe the prior art enclosure "box," stating that "[i]nmost [sic] cases, the box 41 includes outer walls that are made of metal material or rigid plastic material and assembled together by means of screws (not shown)." '112 patent, col. 1, ll. 23-25. Different terms in a patent claim presumptively have different meanings. *See CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG,* 224 F.3d 1308, 1317 (Fed. Cir. 2000). Similarly, in our view, the use of a different term to describe the prior art in the specification suggests that the prior art "box" differs from the claimed "body." Accordingly, we construe the term "body" to mean "an enclosure for an internal circuit board" and conclude that the claimed "body" does not include the prior art box described in the Background of the Invention section of the '112 patent specification.[5, 6] Thus, the claimed body does not include an enclosure containing "outer walls that are made of metal material or rigid plastic material and assembled together by means of screws." '112 patent, col. 1, ll. 23-25.

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[5] The inventor's silence when the examiner called the prior art box a body cannot be relied upon to broaden the scope of the claims. JX-2 at ATEN000141, ATEN000162-63, & ATEN000190. S*ee Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1556 (Fed. Cir. 1997), overruled on other grounds by *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (*en banc*); *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1347 (Fed. Cir. 2005).

[6] The cases on claim construction cited by ATEN and the IA do not persuade us otherwise.

2. "Fixedly Attached"

The ALJ construed the term "fixedly attached" to mean "fastened, attached, or placed so as to be firm and not readily movable." ID at 24. Belkin and Emine argue that the term "fixedly attached" means "permanently joined together." Belkin Submission at 37-42; Belkin Pet. at 5-6; Emine Submission at 31-34; Emine Pet. at 13-14.

We adopt the ALJ's claim construction and here provide reasoning for our construction. In our view, nothing suggests that permanence is a requirement of the claim term "fixedly attached." The claims themselves do not recite "permanently attached." Moreover, Figures 2 and 3 do not show that the term "fixedly attached" requires permanent attachment as the respondents suggest. Even if they were to show a permanently attached fixture, they depict at best preferred embodiments.

Nor does the prosecution history show a contraction or surrender of claim scope as the respondents argue. Although the patent examiner stated "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to use [the] fixedly connection design of Krakovich for the connection of the AAPA, as modified, in order to permanently secure the connector with the device," the Federal Circuit has held that unilateral statements by an examiner do not affect the scope of the claims much less show a surrender by the patentee. JX-2 at ATEN000191. *See Eastman Kodak*, 114 F.3d at 1556; *Salazar*, 414 F.3d at 1347.

In addition, the term "fixedly attached" does not have an established meaning in the field and it does not even appear in the specification of the '112 patent (except in the claims). Tr. at 481-82 (Barker); Tr. at 1117 (Min). Thus, it should be given its general ordinary and customary

meaning. According to the IA, that meaning is "fastened, attached, or placed so as to be firm and not readily movable." IA Resp. at 21 (citing SX-2 (RANDOM HOUSE COLLEGE DICTIONARY, REVISED ED. at 499 (1980)). ATEN argues that the plain and ordinary meaning of the term is "securely brought into association." *See* Complainants ATEN International Co., Ltd. and ATEN Technology, Inc.'s Reply to Respondents' Written Submissions in Response to the Commission's Notice to Review the Initial Determination at 15. There is not much difference between the IA's definition and ATEN's. ID at 24. Accordingly, we construe the term "fixedly attached" to mean "fastened, attached, or placed so as to be firm and not readily movable." ID at 24.

3. "Integrated Into" and "Integrating . . . Into"

The ALJ construed the terms "integrated into" and "integrating . . . into" to mean "formed into a unified whole that is inseparable without disassembling the whole." ID at 35. Belkin and Emine argue that the phrase "integrated into" means "blended or blending into without clear boundary and cannot be disassembled," relying on the fact that the specification describes an integrally injection-molded enclosure, which would result in a blending of the parts. Belkin Submission at 42-43; Emine Submission at 34.

We adopt the ALJ's claim construction and here provide our reasoning. The terms "integrated into" and "integrating . . . into" do not have accepted meanings in the art. Tr. at 496-97 (Barker). Respondents point to the specification's description of the body as "integrally injection-molded" and assert that this suggests that the term "integrated into" requires blending of the parts. Belkin Submission at 42-43; Emine Submission at 34. This assertion ignores the context of the term as it is used in the claims. The claim language at issue is found in claims 13 and 21.

Claim 13 recites that the first end of each cable of the plurality of cables be "integrated into" the body. '112 patent, col. 4, ll. 1-2. Claim 21 recites "integrating a first computer cable and a second computer cable into the body." '112 patent, col. 4, ll. 27-28. The claims, therefore, deal with the integrated nature of the connection between the cables and the body, whereas the specification's description of "integrally injection-molded" referred to by respondents deals with the integral nature of the body, not the connection. Thus, the description in the specification does not impart meaning to the claim term, because they are used in different contexts. Accordingly, nothing in the claims, specification, or prosecution history suggests that the term "integrated into" requires blending of the parts.

The plain meaning of the term "integrate" is "to form, coordinate, or blend into a functioning or unified whole." CX-228 (MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY at 606 (10th ed. 2001)). While this allows blending, it does not require it. Moreover, because claim 13 depends from claim 1, the term "integrated into" recited in claim 13 must have a narrower meaning than the term "fixedly attached" in claim 1. In our view, the unified nature of the term "integrated into" suggests that the cables are inseparable from the body without disassembling the body. Accordingly, we construe the phrases "integrated into" and "integrating . . . into" to mean "formed into a unified whole that is inseparable without disassembling the whole." ID at 35.

B. Infringement

A determination of infringement is a two-step analysis. "First, the court determines the scope and meaning of the patent claims asserted." *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (*en banc*) (citations omitted). "[Second,] the properly construed claims are

compared to the allegedly infringing device." *Id.*

The ALJ found that ATEN did not establish that any of the accused products infringe the asserted claims of the '112 patent, because they do not have a "body" as he defined the term. ID at 39-51. The ALJ nevertheless found that all of the other claim limitations in claims 1, 12, and 14-20 are met by all of the accused products. ID at 42-43. He found that certain products do not meet the limitations of claims 13 and 21, because the cables are not integrated into the body as he construed the term. ID at 44-46.

As noted earlier, the parties stipulated that the accused products form six representative groups. Four of the groups consist of products manufactured by Belkin. The remaining two groups consist of products manufactured by Emine. We determine that none of the accused products infringe the asserted claims of the '112 patent because they all use the prior art "box" criticized by the specification rather than the claimed "body."[7]

The Belkin CA Group 1, Version 1 and Version 2 products, the Belkin Group 2, Version 1 and Version 2 products, and the Belkin Group 3 products, represented by CPX-37, CPX-7, CPX-10, CPX-5, and CPX-6, respectively, all have clamshell casings made of two rigid plastic pieces that are held together by screws. CPX-37; CPX-7; CPX-10; CPX-5; CPX-6; Tr. at 514-22, 552-61, & 569-601 (Barker). Belkin's Group 4 products have a box-type casing that is made of

[7] Because we adopt a claim construction that is similar to the one put forth by Emine, there is no need for remand. ATEN had notice of the claim construction and an opportunity to present evidence that the "body" limitation is met under this claim construction. *See Exxon Chem. Patents, inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1560 (Fed. Cir. 1995). Moreover, the record is fully developed and contains undisputed evidence that permits us to conclusively decide whether the

rigid plastic pieces that are held together by screws. CPX-40; Tr. at 601-07 (Barker). These casings all match the description in the specification of the prior art "box," so they are not "bodies" as required by claims 1 and 21. Because Belkin's products do not meet the limitations of the independent claims, they also do not infringe the asserted dependent claims.

The Belkin CA Group 1, Version 2 products, the Belkin Group 2, Version 2 products, and the Belkin Group 3 products also do not meet the "molded attachment element" limitation of claim 12 or the "integrated" limitations of claims 13 and 21. The cables are fixedly attached to the body by means of thumbscrews and although the cables are attached to the connector plug by means of a molded attachment element, they are not attached to the body that way. CPX-7; CPX-5; CPX-6. Moreover, the cables can be removed from the body without disassembling the whole, so they are not integrated. Thus, these products do not infringe claims 12, 13, and 21 for these additional reasons. Finally, the Belkin Group 4 products do not meet the "providing a plurality of connector ports on a surface of the body" limitation of claim 21. Although the products have connector ports, they are not on the surface of the structure as required by claim 21. CPX-40. Thus, these products do not infringe claim 21 for this additional reason.

The Emine Group 1 and Group 2 products, represented by CPX-9 and CPX-50, respectively, have casings made of two rigid plastic pieces that are held together by screws. CPX-9; CPX-50; Tr. at 608-27 (Barker). These casings also match the description in the specification of the prior art "box," so they are not "bodies" as required by claims 1 and 21. Because Emine's

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accused products infringe the asserted claims under our claim construction. *See Bowers v. Baystate Tech., Inc.*, 320 F.3d 1317, 1334 (Fed. Cir. 2003).

products do not meet the limitations of the independent claims, they also do not infringe the asserted dependent claims. Moreover, the Emine Group 2 products do not meet the "providing a plurality of connector ports on a surface of the body" limitation of claim 21. Although these products have connector ports, they are not on the surface of the structure as required by claim 21. CPX-50. Thus, they do not infringe claim 21 for this additional reason. Accordingly, we conclude that Belkin's and Emine's products do not infringe the asserted claims.[8]

Finally, under our claim construction, there can be no finding of infringement as to the accused products under the doctrine of equivalents, because the inventor excluded the prior art box from the claims and cannot recapture through the doctrine of equivalents what was given up by the specification. *Astrazeneca*, 384 F.3d at 1342.

C. Validity

We need not reach the issue of validity, but as the ALJ ruled in the alternative in this investigation, we follow suit, assessing validity under a broader construction of the term "body." We conclude that if the term "body" were simply construed to mean "an enclosure for an internal

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[8] We note that if the prior art disclosed in the Background of the Invention section of the '112 patent were not excluded from the scope of the claims and the term "body" were simply construed as the "main, central, or principal part" (or as "an enclosure for an internal circuit board"), we agree with the ALJ that all of the accused products would infringe at least claim 1 of the '112 patent. ID at 39-51; *see also* CPX-37; CPX-7; CPX-10; CPX-5; CPX-6; CPX-40; CPX-9; CPX-50; Tr. at 514-22, 552-61, & 569-627 (Barker). In addition, we agree with the ALJ that the additional limitations of claims 12-21 are met by the accused products (except those products expressly referred to above as not meeting certain limitations (*i.e.*, "molded attachment element," "integrated," and "providing a plurality of connector ports on a surface of the body")), and we adopt his findings to that effect. *Id.* We add that, with regard to claim 12, the Belkin Group 2, Version 1 products meet the "molded attachment element" limitation, because the cables are

circuit board" or the "main, central, or principal part," the claims would be invalid as either anticipated or obvious.

An issued patent is presumed valid and the burden is on the party challenging the validity of the patent to show that it is invalid by clear and convincing evidence. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000).

1. Anticipation

A determination that a patent is invalid as anticipated under 35 U.S.C. § 102 requires a finding that each and every limitation is found either expressly or inherently in a single prior art reference. *See Celeritas Techs. Inc. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1360 (Fed. Cir. 1998). Anticipation is a factual question. *See State Contracting and Eng'g Corp. v. Condotte Am., Inc.*, 346 F.3d 1057, 1068 (Fed. Cir. 2003).

The ALJ found that respondents failed to prove that the claims, as he construed them, were invalid. ID at 53-56. Nevertheless, he concluded that if the term "body" were construed broadly as proposed by ATEN and the IA, claims 1, 12, and 14-20 of the '112 patent would be invalid as anticipated. ID at 56. The ALJ found that the following items are prior art: Startech.com ("Startech") SV211K Switch Kit (CPX-4); Avocent OutLook ES Series User Guide (RX-535); ATEN Master View Pro KVM Switch model CS-1016 (RPX-8) and ATEN Master View KVM Switch model CS-228 (CPX-1) used with corresponding cable model 2L-1701P (RPX-9); and associated user manuals (RX-60; RX-42; RX-59). ID at 56-58.

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fixedly attached to the body through a molded attachment component that brings the cables into association with the body. *See* CPX-10.

ATEN argues that the Startech product and certain Avocent products are not prior art. Specifically, ATEN asserts that there is no evidence that these products are the same as the products that were offered for sale more than six years ago. Comp. Submission at 37-38. We note that the Avocent Outlook ES Series User Guide is dated 2001, which is earlier than the July 8, 2002 application date of the '112 patent, so it is prior art. Moreover, we do not have to decide whether the Startech switch is prior art, because ATEN's own switches noted above disclose all of the same elements as the Startech switch and ATEN does not dispute that they are prior art. Accordingly, we rely on the following items of prior art: Avocent OutLook ES Series User Guide (RX-535); ATEN Master View Pro KVM Switch model CS-1016 (RPX-8) and ATEN Master View KVM Switch model CS-228 (CPX-1) used with corresponding cable model 2L-1701P (RPX-9); and associated user manuals (RX-60; RX-42; RX-59).

If the prior art disclosed in the Background of the Invention section of the '112 patent were not excluded from the scope of the claims and the term "body" were simply construed as "an enclosure for an internal circuit board" (or as the "main, central, or principal part") and if the switching circuit were considered to be part of the body, claims 1 and 14-20 would be anticipated by the identified prior art. Claims 12, 13, and 21 would not be anticipated under any claim construction for the term "body." In addition, if the switching circuit were not considered part of the body, none of the claims would be anticipated.[9]

We adopt the ALJ's findings that the prior art switches disclose: a KVM switch with a

[9] The parties dispute whether the claimed switching circuit is part of the body or not. We do not decide this issue, but rather consider invalidity under both constructions.

main part (and we add that the main part is an enclosure for a switching circuit (body)); a switching circuit contained therein; a set of receptacles (connector ports) on a wall of the body to receive the peripheral plugs that are electrically connected to the circuit board; and at least two cables (plurality of cables) that attach to the connector ports attached to the switching circuit that are on the wall of the body by thumbscrew attachments so as not to be readily movable (fixedly attached) and they extend from the switching circuit (which under this alternate claim construction is a body). ID at 59-60; *see also* RX-535; RPX-8; CPX-1; RPX-9; RX-60; RX-42; RX-59. We also agree that the evidence shows that each cable has attached at its computer end a plurality of cable-connected connectors (connector plugs) for insertion into mating receptacles for the peripherals on the computer; the provided or compatible cables sold for use with the switches have matching sets of cable-connected connectors (connector plugs) on each cable for insertion into standard peripheral ports on the computers; and the switching circuit functions so as to switch the electrical connection with the set of peripheral receptacles on the switch wall (connector ports) among each of the plurality of cables. *Id.*

We determine that the thumbscrew attachments do not satisfy the "molded attachment element" limitation of claim 12, because the part of the thumbscrew that attaches to the circuit is the metal screw, not the molded element that connects the cable to the thumbscrew.

With regard to dependent claims 14-20, we agree with the ALJ and his findings that the evidence shows that the set of connector ports on the wall of each prior art switch contains ports to connect computer peripherals (claim 14), including a keyboard port (claim 15), a mouse port (claim 16), and a video port (claim 17) to connect a keyboard, mouse, and display, respectively. ID

at 60; *see also* RX-535; RPX-8; CPX-1; RPX-9; RX-60; RX-42; RX-59. Each cable or set of cables couples the switching circuit to a computer (claim 18). *Id.* Each of the plurality of cables or sets of cables has a keyboard, video, and mouse cable with respective plugs (claim 19). *Id.* Further, there is a second cable or set of cables that couple the switching circuit to a second computer (claim 20). *Id.* Accordingly, claims 1 and 14-20 would be anticipated if the term "body" were construed to mean "an enclosure for an internal circuit board" (or to mean the "main, central, or principal part") and if the switching circuit were considered part of the body, because each and every limitation is met.

2. Obviousness

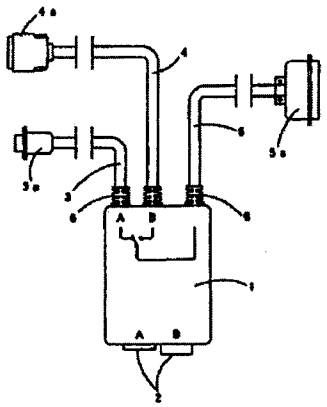
Obviousness is a legal determination based on underlying findings of fact. *In re Kotzab,* 217 F.3d 1365, 1369 (Fed. Cir. 2000). The underlying factual inquiries include (1) the scope and content of the prior art, (2) the level of ordinary skill in the art, (3) the differences between the claimed invention and the prior art, and (4) secondary considerations of nonobviousness. *Graham v. John Deere Co.,* 383 U.S. 1, 17-18 (1966). The Supreme Court reaffirmed the importance of these inquiries in *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007).

Before the ALJ, respondents argued that the asserted claims are invalid for obviousness and the IA argued that claims 13 and 21 are invalid for obviousness in light of the prior art. ID at 61. The ALJ determined that claims 13 and 21 are not invalid for obviousness under his claim construction, but that they would be under the claim constructions proposed by ATEN and the IA. ID at 63. Specifically, he found that a person of ordinary skill in the art could have reasonably combined the disclosures of the allegedly anticipating prior art with the Yamada reference to arrive

at the claimed invention. ID at 63.

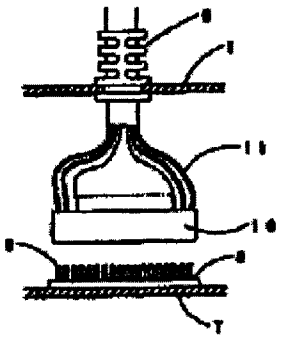
The Yamada reference (RX-522 (certified translation)) is a Japanese patent application with a publication date of February 25, 1997. It discloses an automatic switch for personal computer peripherals. Although the Yamada reference does not expressly disclose a KVM switch, it discloses a design that allows a user to switch a printer connection between two computers. Moreover, the Yamada reference discloses that the printer can be replaced with a display signal or various other types of computer or peripheral devices. RX-522 at 3(0011).

More specifically, the Yamada reference discloses a device shown in Figure 1 and described in paragraph (0009) that has a housing (a body) that encloses a switching circuit. Figure 1 is shown below:



The device described in Yamada also has a set of connector ports (A & B) that are electrically coupled to the switching circuit. In addition, it has three cables (3, 4, and 5) that are "fitted into the main housing unit 1 directly with one end of the cable via a protective ring 6." RX-522 at 2(0009). Figure 2 more clearly shows the protective ring 6 and shows that it has a lip on the inside and outside of the housing so that the attachment element connects the cable fixedly to the housing and

the cables extend from the housing. RX-522, Figure 2; Tr. at 1222, 1226 (Min). Figure 2 is shown below:



Thus, the Yamada reference discloses a body, where the cables are fixedly attached to the body, not the switching circuit. Moreover, Yamada discloses a plurality of cables that are integrated into the body as required by claims 13 and 21 and it discloses a molded attachment element, *i.e.*, the protective ring 6, as required by claim 12. As such, it discloses cables that are fixedly attached and extending from the body, even if the term "body" were construed to exclude the switching circuit.

The Yamada reference does not, however, disclose cables that have a plurality of connector plugs, where the plugs are matched with the plugs of the other cables. The prior art references discussed with regard to anticipation, however, disclose these other elements. Accordingly, each and every limitation of claims 1 and 12-21 is disclosed by the prior art. *See* Tr. at 1460 (Barker). The Supreme Court recently stated that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR*, 127 S.Ct. at 1739. In this case, substituting the known protective ring from Yamada for the thumbscrew connections in ATEN's prior art switches would predictably result in the cables being fixedly attached to, directly extending from, and integrated into the body as claimed. The

protective ring would perform the same function in both applications.

ATEN asserts that the Yamada reference is directed to printer switches, not KVM switches. Comp. Submission at 31. Yamada, however, indicates that it could connect two computers to one printer or one computer to two printers and that other computer peripherals could be used, including a monitor. RX-522 at 2-3(0011). Mice and keyboards are also computer peripherals. Moreover, printer switches are not so different from KVM switches that a person of ordinary skill in the art would have no knowledge of printer switches. Tr. at 1457-61 (Barker); Tr. at 1369-70 (Min). And finally, the claims themselves are not limited to KVM switches, but are directed generally to a "switch." '112 patent, col. 3, ll. 19-32. Thus, we believe that the printer switch of Yamada is relevant prior art.

Finally, secondary considerations do not suggest that the claims are not invalid for obviousness. The ALJ found that while ATEN offered evidence regarding commercial success and copying of their cable KVM switch in general, its evidence did not focus on the integrated cables. *See* ID at 67. Additionally, he found that this evidence was rebutted by a showing that the cable KVM products were not necessarily successful, that Emine did not copy ATEN's design, and that their appearance and any success in the market may have been driven by market changes, rather than by any alleged copying of an ATEN product or design. *See id.* We agree and adopt his analysis of the secondary considerations evidence. Accordingly, we conclude that claims 1 and 12-21 would be invalid for obviousness in light of the prior art if the term "body" were construed to mean "an enclosure for an internal circuit board" (or to mean the "main, central, or principal

part") and if the switching circuit were not considered part of the body.[10]

D. Domestic Industry

In order to prove a violation of section 337 in a patent-based action, a complainant must demonstrate that a domestic industry exists or is in the process of being established. 19 U.S.C. § 1337(a)(2). *See Certain Microsphere Adhesives, Process For Making Same, and Prods. Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, USITC Pub. 2949, Comm'n. Op. at 8 (Jan. 1996). Because there are other dispositive issues in this case, we do not address the issue of whether ATEN has met the domestic industry requirement.[11] *See Beloit Corp. v. Valmet OY*, 742 F.2d 1421, 1422-23 (Fed. Cir. 1984).

III. CONCLUSION

For the reasons discussed above, respondents Belkin and Emine did not violate section 337.

By order of the Commission.

Marilyn R. Abbott
Secretary to the Commission

Issued: February 29, 2008

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[10] Likewise, claims 12, 13, and 21 would be obvious if the term "body" is construed to mean "an enclosure for a switching circuit" or to mean the "main, central, or principal part" and the switching circuit is considered part of the body.

[11] We do note, however, that at least three of ATEN's alleged domestic industry products appear to meet the limitations of claim 1 as we have construed them. *See, e.g.*, CPX-19; CPX-51; CPX-45.

CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME **337-TA-589**

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the Commission Investigative Attorney, Anne Goalwin, Esq., and the following parties as indicated, on February 29, 2008.

Marilyn R. Abbott, Secretary
U.S. International Trade Commission
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PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of	
CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME	Investigation No. 337-TA-589

RECOMMENDED DETERMINATION ON REMEDY AND BONDING
Administrative Law Judge Carl C. Charneski

I. Background

On November 7, 2007, the Administrative Law Judge issued the Initial Determination in this investigation, finding 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 switches or products containing same by reason of infringement of one or more of claims 1 and 12-21 of United States Patent No. 7,035,112. The Commission's Rules require that subsequent to an initial determination on the question of violation, the Administrative Law Judge 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) of the Tariff Act. 19 C.F.R. § 210.42(a)(1)(ii).

The complainants are ATEN International Co., Ltd. of Taipei, Taiwan, and ATEN Technology, Inc. of Irvine, California (collectively "complainants" or "ATEN"). The Commission named the following companies as respondents: Belkin Corporation and Belkin Logistics, Inc. (collectively "Belkin"), both of Compton, California; Emine Technology Co., Ltd. ("Emine") of Taipei, Taiwan; JustCom Tech, Inc. ("JustCom") of San Jose, California; and RATOC Systems, Inc. of Osaka, Japan, and RATOC Systems International, Inc. of Santa Clara, California (collectively "RATOC").[1] The Commission Investigative Staff of the Office of Unfair Import Investigations ("Staff") is also a party. 71 Fed. Reg. 70983-984 (2006); RX-4.

II. Remedy

A. Limited Exclusion Order

The Commission has broad discretion in selecting the form, scope, and extent of the remedy in a section 337 proceeding. *Viscofan, S.A. v. United States Int'l Trade Comm'n*, 787 F.2d 544, 548 (Fed. Cir. 1986). 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).

In this instance, ATEN requests a general exclusion order. ATEN requests a limited exclusion order only in the alternative. It is not disputed that if the accused products are found to infringe, ATEN would be entitled at least to the relief afforded by a limited exclusion order, *i.e.*, an order directed specifically to respondents' accused products. However, as discussed below, it

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[1] On November 7, 2007, RATOC and JustCom were terminated as respondents. *See* Order No. 38 (Initial Determination).

has not been established that the record would support the entry of a general exclusion.

The 337 statute provides that the Commission may order a general exclusion of infringing goods from entry into the United States if such a general exclusion is necessary to prevent circumvention of an exclusion order limited to products or named persons or there is a pattern of violation and it is difficult to identify the source of the infringing products. 19 U.S.C. § 1337(d)(2)(A)(B). Under the so-called *Spray Pumps* test, to obtain a general exclusion order, a complainant must satisfy two prongs: (1) a widespread pattern of unauthorized use of the patented invention (including unauthorized importation into the U.S. of infringing articles by numerous foreign manufacturers and other evidence of a history of unauthorized foreign use of the patented invention), and (2) certain business conditions from which one might reasonably infer that foreign manufacturers other than respondents to the investigation may attempt to enter the U.S. market with infringing articles. *Certain Airless Paint Spray Pumps and Components Thereof,* Inv. No. 337-TA-90, Comm'n Op. (1981) ("*Spray Pumps*").

The Commission has identified a number of factors that should be considered with respect to the "certain business conditions" element, or second prong, of the *Spray Pumps* test, including:

> 1. An established market for the patented product in the U.S. market and conditions of the world market;
>
> 2. The availability of marketing and distribution networks in the United States for potential foreign manufacturers;
>
> 3. The cost to foreign entrepreneurs of building a facility capable of producing the patented article;
>
> 4. The number of foreign manufacturers whose facilities could be retooled to produce the patented article; or

5. The cost to foreign manufacturers of retooling their facility to produce the patented article.

See, e.g., Certain Condensers, Parts Thereof And Products Containing Same, Including Air Conditioners For Automobiles, Inv. No. 337-TA-334, Comm'n Determination (Sept. 10, 1997) ("*Condensers*").

With respect to the first prong of the *Spray Pumps* test, ATEN did not offer evidence at the hearing to substantiate an unauthorized and widespread use of the patented invention.[2]

Nor is there the evidence to support a conclusion that certain business conditions exist from which one might reasonably infer that foreign manufacturers other than respondents may attempt to enter the domestic market with infringing articles (*Spray Pumps* second prong).

In particular, the evidence offered by the parties concerning the relative ease with which manufacturers other than respondents could enter the market is mixed at best, and not well developed. In any event, ATEN's argument that any KVM manufacturer can manufacture infringing switches with no additional investment (ATEN Br. at 54) is not confirmed by the record.

For example, there is evidence that the complexity of the technology required to manufacture KVM switches would not be a strong barrier to entry for new manufacturers, and that the cost of production is low. *See, e.g.,* A. Chen Tr. 227-234; Schulemson Tr. 408; Joint

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[2] Although settlements have been reached with respondents JustCom and RATOC, admissions of infringement bargained from a settlement are not sufficient evidence, in and of themselves, of infringement for purposes of showing a widespread pattern of infringement. *See, e.g., Certain Plastic Molding Machines*, Inv. No. 337-TA-462, Comm'n Op. at 20-21 (Apr. 2, 2003); *Certain Bearings and Packaging Thereof*, Inv. No. 337-TA-469, 2003 ITC LEXIS 90, Order No. 106 (Feb. 24, 2003).

Stip. No. 17 (Emine's equipment costs). However, although the claims of the '112 patent read on a portion of the manufacturing process that does not relate directly to computer technology, KVM switches in general play an integral role in computer operations and thus a manufacturer of KVM switches must have proficiency in computers, computer hardware, computer memory and software. There is also evidence that in order to manufacture KVM switches, even a manufacture of other computer peripherals (including various types of KVM switches) would have to retool its manufacturing equipment in order to make switches that practice the patent. *See* Zhang Tr. 383, 389; A. Chen Tr. 229-231.

In sum, if the Commission determines in this investigation that there has been a violation of section 337, it is recommended that a limited exclusion order should issue. However, it is not recommended that the Commission issue a general exclusion order.

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, Comm'n Op. on Remedy, the Public Interest and Bonding at 37-42, USITC Pub. 2391 (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).

ATEN seeks a cease and desist order against the Belkin respondents. It does not appear

that ATEN seeks such an order against Emine (a foreign entity).

It appears that no party has contested the entry of cease and desist orders against the Belkin respondents in the event that a violation of section is found with respect to Belkin's accused products. The record substantiates ATEN's claim that Belkin maintains a commercially significant inventory of accused products in the United States. *See* CX-48A.

Consequently, it is recommended that if a violation of section 337 is found with respect to Belkin products, the Commission should issue cease and desist orders directed toward the Belkin respondents.

C. Bond

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. 337-TA-337, Commission Op. at 41 (1995). A 100 percent bond has been required when no

effective alternative existed. *See 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).

In this case, there is no reliable evidence of a reasonable royalty rate, or evidence to support an effective alternate for calculating the bond.[3] Consequently, if the Commission issues a remedy, it is recommended that the bond be set at 100 percent.

III. Conclusions

In accordance with the discussion of the issues contained herein, it is the RECOMMENDED DETERMINATION ("RD") of the Administrative Law Judge that in the event that the Commission determines that respondents have committed a violation of section 337, the Commission should issue a limited exclusion order. It recommended that if a violation is found with respect to Belkin's products, the Commission should issue cease and desist orders directed toward the Belkin respondents. Furthermore, if the Commission imposes a remedy following a finding of violation, respondents should be required to post a bond of 100% of the value of infringing devices imported during the Presidential review period.

The Secretary shall serve a confidential version of this RD upon counsel who are signatories to the Protective Order issued by the Administrative Law Judge in this investigation

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[3] Respondents argue that there would be no need for a bond during the Presidential review period because they sell products at a higher price than ATEN. However, that argument is not substantiated in law, and it is unclear that ATEN could not be harmed by continued sales of accused products.

(Order No. 1), and the Commission investigative attorney. To expedite service of the public version, counsel for each party are hereby ORDERED to file by no later than November 28, 2007, a copy of this RD with those sections considered by the party to be confidential bracketed in red, or if confidential treatment is not requested for any portion of this RD, a statement to that effect.

Carl C. Charneski
Administrative Law Judge

Issued: November 21, 2007

CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME **Inv. No. 337-TA-589**

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **ORDER** was served by hand upon Commission Investigative Attorney Heidi E. Strain, Esq., and upon the following parties via first class mail and air mail where necessary on February 26, 2008.

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

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CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME **Inv. No. 337-TA-589**

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PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of	
CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME	**Investigation No. 337-TA-589**

INITIAL DETERMINATION
Administrative Law Judge Carl C. Charneski

Pursuant to the notice of investigation, 71 Fed. Reg. 70983 (2006), this is the Initial Determination in the matter of Certain Switches and Products Containing Same, United States International Trade Commission Investigation No. 337-TA-589. *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 switches or products containing same by reason of infringement of one or more of claims 1 and 12-21 of United States Patent No. 7,035,112.

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The following abbreviations may be used in this Initial Determination:

ALJ - Administrative Law Judge

ALJX - Administrative Law Judge Exhibit

CDX - Complainants' Demonstrative Exhibit

CPX - Complainants' Physical Exhibit

CX - Complainants' Exhibit

Dep. - Deposition

EDIS - Electronic Document Imaging System

FF - Finding(s) of Fact

JPX - Joint Physical Exhibit

JX - Joint Exhibit

PCL - Proposed Conclusion of Law (CPCL, RPCL or SPCL)

PFF - Proposed FF (CPFF, RPFF or SPFF)

PRF - Proposed Reply or Rebuttal Finding (CPRF, RPRF or SPRF)

RDX - Respondents' Demonstrative Exhibit

RPX - Respondents' Physical Exhibit

RX - Respondents' Exhibit

SX - Commission Investigative Staff Exhibit

Tr. - Transcript.

I. BACKGROUND

A. Institution and Procedural History of This Investigation

By publication of a notice in the *Federal Register* on December 7, 2006, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted this investigation 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 switches or products containing same by reason of infringement of one or more of claims 1 and 12-21 of U.S. Patent No. 7,035,112, and whether an industry in the United States exists or is in the process of being established as required by subsection (a)(2) of section 337.

71 Fed. Reg. 70983-984 (2006).

The complainants are ATEN International Co., Ltd. of Taipei, Taiwan, and ATEN Technology, Inc. of Irvine, California (collectively "complainants" or "ATEN"). *Id.*; RX-4.

The Commission named the following companies as respondents: Belkin Corporation and Belkin Logistics, Inc. (collectively "Belkin"), both of Compton, California; Emine Technology Co., Ltd. ("Emine") of Taipei, Taiwan; JustCom Tech, Inc. ("JustCom") of San Jose, California; and RATOC Systems, Inc. of Osaka, Japan, and RATOC Systems International, Inc. of Santa Clara, California (collectively "RATOC"). *Id.*; RX-4.

The Commission Investigative Staff ("Staff") of the Office of Unfair Import Investigations ("OUII") is also a party in this investigation. *Id.*

The evidentiary hearing on the question of violation of section 337 commenced on

July 16, and concluded on July 20, 2007. Tr. 63-1485.[1] ATEN, Belkin, Emine and the Staff were represented at the hearing. RATOC and JustCom did not file prehearing statements and were not represented at the hearing.[2]

Stipulations, however, were not reached until *after* the hearing. On July 23, 2007, ATEN, Belkin and Emine filed their "Joint Stipulations" with the Commission Secretary, which addressed a wide range of issues. On August 6, 2007, ATEN, Belkin and Emine filed a "Second Joint Stipulation," which addressed the design and manufacture of Emine products. The Second Joint Stipulation superseded and replaced Stipulation No. 11 contained in the earlier filed Joint Stipulations.

The Staff has not objected to these Stipulation documents or to any of the individually numbered Stipulations contained therein. Indeed, Staff has relied on several of the individually

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[1] The prehearing conference in this investigation immediately preceded the hearing and is recorded at transcript pages 6-56.

[2] On July 7, 2007, shortly before the evidentiary hearing scheduled in this investigation, ATEN and RATOC filed a joint motion to terminate this investigation as to RATOC on the basis of a settlement agreement and proposed consent order (Motion Dkt. No. 589-33). That motion was denied due to a legal defect in the text of the proposed consent order. *See* Order No. 35. Subsequently, on August 3, 2007, ATEN and JustCom filed a joint motion to terminate this investigation as to JustCom on the basis of a settlement agreement and proposed consent order (Motion Dkt. No. 589-40). That motion also was denied due to a legal defect in the text of the proposed order. *See* Order No. 36.

On September 19, 2007, ATEN, RATOC and JustCom filed a "Renewed Joint Motion for Partial Termination Based on Settlement and License Agreements Between Complainants and Respondents RATOC Systems, Inc., RATOC Systems International, Inc. and JustCom Tech, Inc. And Memorandum in Support Thereof." (Motion Dkt. No. 589-44.) The Staff supported this motion. On November 7, 2007, the joint motion for partial termination was *granted* and an Initial Determination issued dismissing RATOC Systems, Inc., RATOC Systems International, Inc., and JustCom Tech, Inc. as respondents in this investigation. *See* Order No. 38 (Initial Determination).

numbered Stipulations in its briefs. The Joint Stipulations and Second Joint Stipulation are, therefore, accepted into the record.[3]

B. The Products at Issue

This investigation is based on ATEN's allegation that certain products manufactured and, or, sold by the respondents infringe claims of its United States Patent No. 7,035,112 ("the '112 patent"). *See* JX-1; CX-7;RX-1. All of the accused products are called "KVM switches" (with KVM standing for Keyboard, Video display and Mouse). KVM switches such as those at issue in this investigation allow more than one computer to share peripheral devices. Thus, a KVM switch will allow two (or more) computers to be controlled from the same keyboard, using the same video display, and the same mouse. *See* Joint Stips. at 1-4; *see also,* CDX-500 & RDX-2. KVM switches are not new. They first came into use in the early 1980s, primarily used by IT professionals. Min. Tr. 1038-1039.[4]

Indeed, as explained by ATEN's expert witness, Dr. Donald Barker, a single operator with one keyboard, one video screen, and one mouse can, via the KVM switch, "switch this keyboard, video, and mouse to anyone of a set of computers." Barker Tr. 437-438. By the operator's pressing a button or through a sequence of key strokes, the KVM switch allows the computer operator to seamlessly move from one computer to another while using a single keyboard, video, and mouse. *Id.*

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[3] A page was missing from the Joint Stipulations as originally filed with the Commission Secretary. On September 27, 2007, Belkin's counsel filed a document entitled "Erratum to Stipulations," which contains a corrected copy of the Joint Stipulation with a copy of the Second Joint Stipulation.

[4] Dr. Paul Min is respondents' expert witness.

ATEN accuses many KVM switches of infringement, which have different features and which bear more than two dozen product names. Some switches bearing the same product name have been manufactured in more than one version. In some cases, substantially similar products originating from the same manufacturer have been given different names when sold by different companies.

The parties have agreed that the accused products can be categorized into six groups, based upon the specific features of the switches that are relevant for the purposes of the infringement analysis to be performed in this investigation. The parties have identified which accused products fit within each of these six groups. *See* Joint Stips.; Second Joint Stip. The specific groups are discussed in this Initial Determination as part of the infringement analysis, *infra* (Section IV).

II. IMPORTATION OR SALE

The record shows, and it is uncontested, that Belkin and Emine have imported and, or, sold after importation the accused products. *See* Joint Stips. at 1-7; Second Joint Stip.; Staff Br. at 54-55.[5]

III. CLAIM CONSTRUCTION

A. Applicable Law

Pursuant to the Commission's notice of investigation, this is a patent-based investigation. *See* 71 Fed. Reg. 70983-984 (2006). Indeed, all of the unfair acts claimed alleged by ATEN to have occurred are instances of alleged infringement of the '112 patent. Any finding of

[5] In addition, no party has contested the Commission's personal jurisdiction over the parties. Nor has any party contested subject-matter jurisdiction over the products subject to this investigation. *See, e.g.,* Belkin Proposed Conclusions of Law, Section I, ¶¶ 1-2.

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.[6] Second, a factual determination must be made as to whether the properly construed claims read on the accused devices. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995)(*en banc*), *aff'd*, 517 U.S. 370 (1996).

Claim construction begins with the language of the claims themselves. Claims should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art, viewing the claim terms in the context of the entire patent. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).[7]

In some instances, claim terms do not have particular meaning in a field of art, and claim construction involves little more than the application of the widely accepted meaning of commonly understood words. *Id.* at 1314. In such circumstances, general purpose dictionaries may be helpful. In many cases, claim terms have a specialized meaning, and it is necessary to

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[6] Only those claim terms that are 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).

[7] With respect to claim preambles, the Court of Appeals for the Federal Circuit has explained 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 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) (quoting *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995)).

determine what a person of skill in the art would have understood disputed claim language to mean, by analyzing the words of the claims themselves, the remainder of the 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.* (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

In cases in which the meaning of a claim term is uncertain, the specification usually is the best guide to the meaning of the term. *Id.* at 1315. As a general rule, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Markman*, 52 F.3d at 979. However, the specification is always highly relevant to the claim construction analysis. The specification is usually dispositive. It is the single best guide to the meaning of a disputed term. *Phillips*, 415 F.3d at 1315. Moreover, "[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.

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, including inventor testimony, expert testimony and learned treatises. *Id.* at 1317. Inventor testimony can be useful to shed light on the relevant art. In evaluating expert testimony, a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent. *Id.* at 1318. Extrinsic evidence may be considered if a court deems it helpful in determining the true meaning of language used in the patent claims. *Id.*

B. The '112 Patent

In this investigation, ATEN asserts the '112 patent, which is entitled "Automatic Switch." The '112 patent issued on April 25, 2006, to Kevin Chen. The patent was assigned to ATEN. CX-7; RX-1. The '112 patent specification describes the environment in which the claimed switch can be used, and problems associated with the use of conventional automatic switches manufactured according to the prior art. In that regard, the specification's "Background of the Invention" section states:

> The present invention relates to an automatic switch for a user to automatically switch between two or more computer configurations, and more particularly to an automatic switch that has an integrally injection-molded enclosure to provide good weather-resistance, impact-resistance, and absolute protection of an internal circuit board thereof.
>
> The highly developed electronic and information technologies enable people to collect required information or to trade directly over networks via computers, making computers a requisite tool in people's work, learning, entertainments, leisure activities, and daily life.
>
> For people to access two or more computers at the same time, there is developed an automatic switch to enable a user to automatically switch among different signal paths. FIG. **1** shows a conventional automatic switch **40** that is configured into a box **41**.[8] The box **41** is internally provided with a circuit board (not shown). Ports **42**, **43**, and **44** for various types of signal cable connectors are provided on peripheral walls of the box **41**. Inmost cases, the box **41** includes outer walls that are made of metal material or rigid plastic material and assembled together by means of screws (not shown). The automatic switch **40** is normally positioned on a host enclosure of a computer configuration and tends to unexpectedly fall off the host enclosure to result in a

[8] "FIG. **1** a perspective view of a conventional automatic switch for switching between two or more computer configurations." CX-7 & RX-1, col. 2, ll. 8-10 ("Brief Description of the Drawings"). FIG **1** is reproduced below.

> damaged circuit board due to vibration. Moreover, when a high humidity exists, moisture in the air tends to attach to the circuit board to cause short circuit. Repair or maintenance of the circuit board is therefore required.

Id., col. 1, ll. 5-32.

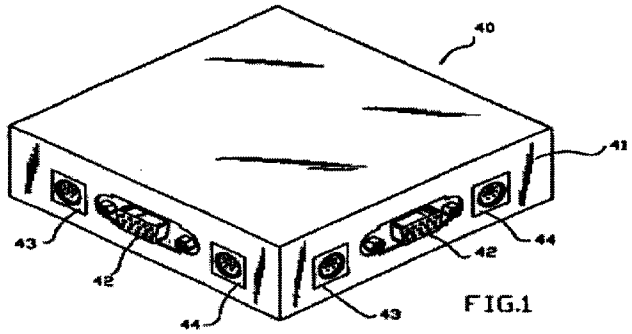

FIG.1
PRIOR ART

In its "Summary of the Invention," the specification discusses how the patentee addressed the problems associated with conventional switches, and provides a general description of the claim invention, as follows:

> A primary object of the present invention is to provide a plug-type automatic switch for a user to access and control multiple computer configurations through one single switch. The automatic switch includes a main body externally provided with connector ports and enclosing an internal circuit board. The main body has an integrally injection-molded plastic enclosure to provide good weather-resistance, impact-resistance, and absolute protection of the internal circuit board and circuits thereon.
>
> The automatic switch of the present invention also includes more than one or two sets of cable-connected connectors directly extended from the main body and electrically connected to the internal circuit board via signal cables.

> The integrally injection-molded enclosure of the main body includes a circuit-protecting layer for enclosing the circuit board, an outer case enclosing the circuit-protecting layer, and an anti-slipping layer coating an outer surface of the outer case.
>
> The circuit-protecting layer of the main body is made of a plastic material having a low melting point to avoid damages to circuits provided on the circuit board during the injection molding.
>
> The outer case of the main body has good strength and high rigidity and therefore provides excellent protection to the internal circuit board and the entire main body of the automatic switch.
>
> The anti-sl[i]pping layer of the main body has soft surface to enable firm holding of the main body and convenient plugging and unplugging of signal cables in and from the main body.

Id., col. 1, ll. 37-67.

C. <u>One of Ordinary Skill in the Relevant Art</u>

ATEN advances its position as to one of ordinary skill in the art of KVM switches through the testimony of its expert witness, Dr. Barker. *See* ATEN Br. at 3. In Dr. Barker's view, such a person of ordinary skill in the art at the time of the '112 patent would have at least a Bachelor of Science degree in either mechanical or electrical engineering and at least two years of experience designing electrical connections and packaging for electronic consumer devices including computer peripherals. Barker Tr. 461-462.

Dr. Barker added that one of ordinary skill in the art could also have only an associate degree if that person had one or two years of work experience (*i.e.*, the equivalent to a year of college education), and an additional four to six years work experience in the field. *Id.* Finally, in Dr. Barker's view, in the context of the '112 patent one of ordinary skill would have to understand the functionality of the circuit and what it does, but need not know how to design the

details of the circuit. Barker Tr. 463.

Respondents Belkin and Emine take a different view as to one of ordinary skill in the art in 2002, when the '112 patent issued. In that regard, both Belkin and Emine cite to the testimony of its expert witness, Dr. Min, that one of ordinary skill "would have at a minimum a Bachelor of Science Degree in Electrical Engineering, Computer Science or Computer Engineering with course work in communication systems and electronics [and] would have at least three years of post-graduate industrial experience in the communication equipment industry." Min Tr. 1048 & RDX-32; *see* Belkin Br. at 43 & Emine Br. at 4.

For purposes of this investigation, Staff sees no difference between complainants' and respondents' version of one of ordinary skill in the art such that adoption of one definition over the other would materially affect the opinion of either side's expert. Staff Br. at 5, n.4. Nonetheless, Staff concurs with respondents' definition "because the evidence shows that the mechanical engineering and packaging background suggested by Complainants does not take into account certain complexities of electrical systems as they affect relevant packaging concerns." *Id.* For example, Staff cites to the testimony of ATEN witness Joseph Zhang that an electrical engineering background is important at ATEN Technology in order to understand issues related to KVM product design. *Id.;* Zhang Tr. 386-387.

The question presented is both one of the level of education and, or, the experience required for one of ordinary skill, as well as a determination of the relevant art to which the '112 patent applies. As noted, ATEN would require one of ordinary skill to have an electrical or mechanical engineering degree and experience designing electrical connections and packaging for computer peripherals and respondents would require one of ordinary skill to have an electrical

or computer engineering degree and course work relating to communications systems and electronics. Respondents are correct.

The patent specification, both in its "Background" and "Summary of Invention," states that the claimed invention relates both to the protection of the switch's internal circuitry and to "[t]he highly developed electronic and information technologies" and to the ability "to access and control multiple computer configurations through one single switch." CX-7 & RX-1, col. 1, ll. 5-44. Consequently, one of ordinary skill in the relevant art must be able to understand both the packaging elements of the claimed invention and the technical applications for which the claimed switch would be used. *See* Min Tr. 1051-1054.

Accordingly, respondents' proposal is adopted. One of ordinary skill in the art relevant to the '112 patent would have at a minimum a Bachelor of Science degree in Electrical Engineering, Computer Science, or Computer Engineering, with course work in communications systems and electronics, and at least three years of post-graduate industrial experience in the communication equipment industry.

D. <u>The Disputed Claim Terms and Their Proper Construction</u>

The patent contains 23 claims (CX-7 & RX-1, col. 3, line 19 through col. 4, line 56), 11 claims of which are alleged by ATEN to be infringed by the respondents' products, *i.e.,* claims 1, 12-21 (*see, e.g.,* ATEN Br. at 22-33). The patent contains two independent claims, both of which are asserted by ATEN, *i.e.,* claims 1 and 21. Claims 1 and 21 are similar, with claim 1 pertaining to a switch, whereas claim 21 pertains to a method. *Compare* CX-7 & RX-1, col. 3, line18 *with* col. 4, ll. 24-25.

Claims 1 and 21 provide, as follows:

> **1.** A switch comprising:
>
> a body;
>
> a switching circuit contained within the body;
>
> a set of connector ports electrically coupled to the switching circuit; and,
>
> a plurality of cables fixedly attached to and extending from the body, each cable in the plurality of cables having a plurality of connector plugs, wherein each connector plug in the plurality of connector plugs for one of the cables in the plurality of cables are matched a respective connector plug in another one of the cables in the plurality of cables, and wherein the switching circuit switches to connect each of the set of connector ports to one of the plurality of cables.
>
> **21.** A method comprising the steps of:
>
> providing a body;
>
> enclosing a switching circuit within the body;
>
> integrating a first computer cable and a second computer cable into the body, each of the first computer cable and the second computer cable including a first end electrically coupled to the switching circuit and a second end having a plurality of connector plugs, each connector plug in the plurality of connector plugs in the first computer cable being matched to a corresponding one of the plurality of connector plugs in the second computer cable; and,
>
> providing a plurality of connector ports on a surface of the body, the plurality of connector ports electrically coupled to the switching circuit;
>
> wherein the switching circuit electrically switches the plurality of connector ports between the plurality of connector plugs of the first computer cable and the second computer cable.

CX-7 & RX-1, col. 3, ll. 18-32 (claim 1) and col. 4, ll. 23-42 (claim 21).

The following claim terms are disputed by the parties, and relied upon in their arguments concerning the infringement and, or, validity issues: (1) "body," (2) "fixedly attached," (3) "connector plugs," (4) "connector ports," (5) "cable," (6) "molded attachment element," (7) "integrated into." All but two of the disputed terms (*i.e.,* molded attachment element, and integrated into a body and integrating into a body) are found in independent claim 1, while all but one of the disputed terms *(i.e.,* molded attachment body) are found in independent claim 21.[9]

Each of these disputed claim term is construed below.

(1) "body"

This investigation turns in large measure upon the construction of the claim term "body." ATEN construes "body" to mean "the main, central, or principle part." ATEN Br. at 9, quoting *Merriam-Webster's Collegiate Dictionary* at 138 (11th ed. 2003); Barker Tr. 465; CDX-515. ATEN maintains that the claim term "body" does not include the circuit board, the switch circuitry, and the other electronic elements on the circuit board such as the connector ports. ATEN Br. at 13.

Respondents Belkin and Emine advance a more limiting construction of this claim term. Relying on the opinion of their expert, Dr. Min, respondents submit that the term "body," means "a single integral enclosure that is not assembled from separate parts, such as by means of screws." Belkin Br. at 11 & Emine Br. at 7; Min Tr. 1066-1067; RDX-42.

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[9] Asserted claim 12 of the '112 patent is: "The switch of claim **1**, wherein the plurality of cables are fixedly attached to the body through a molded attachment element." CX-7 & RX-1, col. 3, ll. 56-58.

Staff concurs with ATEN's definition of "body" as being the "main, central or principal part." In its view, this is the "plain and ordinary meaning of the term." Staff Br. at 5-8.[10]

It is undisputed that the claim term "body" as used in the asserted claims of the '112 patent is not a "term of art." In other words, it has no particular meaning to one of ordinary skill in the relevant art. *See* ATEN Br. at 9; Belkin Br. at 10; *see also,* Barker Tr. 465; Min Tr. 1135-1136. Thus, where to begin to construe this crucial term?

ATEN and Staff look to the dictionary in order to determine the "plain and ordinary meaning" of the claim term "body." Belkin and Emine look to the '112 patent, in particular to the specification, to find out what the inventor meant when he used this claim term. As explained below, the construction approach adopted by Belkin and Emine is the correct approach and the construction approach adopted by ATEN and Staff is incorrect.

The Court in *Phillips v. AWH Corp.,* 415 F.3d 1303, 1321 (Fed. Cir. 2005)(*en banc*) offers construction guidance that is particularly apt to the present circumstances. There, the Federal Circuit stated that "the specification is 'the single best guide to the meaning of a disputed term,' and that the specification 'acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.' *Vitronics*, 90 F.3d at 1582; *Irdeto Access, Inc. v. Echosta Satellite Corp.,* 383 F.3d 1295, 1300 (Fed. Cir. 2004) ('Even when guidance is not provided in explicit definitional format, 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.')

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[10] Staff does, however, takes issue with certain limitations on ATEN's dictionary definition of "body" that were advanced by complainants' expert, Dr. Barker, at hearing. *See* Staff Br. at 6, n.5. In Staff's view, the testimony of Dr. Barker regarding these limitations constitutes an improper "after-the-fact attempt to limit his original construction." Specifically, an after-the-fact attempt that Staff believes is "unsubstantiated." *Id.*

(citations omitted); *Novartis Pharms. Corp. v. Abbott Labs.*, 375 F.3d 1328, 1334-35 (Fed. Cir. 2004)(same)."

Despite the Federal Circuit's guidance in *Phillips,* ATEN and Staff begin (and end) with a dictionary definition in an attempt to construe the claim term "body."[11] They submit that according to *Merriam-Webster's Collegiate Dictionary, id.,* the term "body" means the "main, central, or principal part." This proposed construction (which essentially tells us nothing) must fail.

First, as discussed in *Phillips, supra,* reliance upon a dictionary definition for claim construction is a practice clearly disfavored by the Federal Circuit in most circumstances. Indeed, in that case, the Court additionally offered the following pertinent observation:

> The main problem with elevating the dictionary to such prominence is that it focuses the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent. Properly viewed, the 'ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent. Yet heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification. The patent system is based on the proposition that claims cover only the invented subject matter. As the Supreme Court has stated, '[i]t seems to us that nothing can be more just and fair, both to the patentee and the

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[11] Staff takes this approach despite noting a long line of Federal Circuit cases standing, in Staff's view, for the proposition that "[i]n construing a claim, the specification and prosecution history should be used to interpret what the patentee meant by words or phrases in the claim and to give necessary context." Staff Br. at 2-3, citing, *Phillips,* 415 F.3d at 1319; *Markman v. Westview Instruments, Inc.*, 52 F.3d 969, 979 (Fed. Cir. 1995)(*en banc*), *aff'd* 517 U.S. 370 (1996); *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003). While Staff did consider the '112 patent specification (*see* Staff Br. at 7-9), like ATEN, it did so only after first arriving at a dictionary definition of the claim term "body," a definition that Staff cloak's in the protective cover of what it the terms the "plain and ordinary meaning" of "body."

> public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent.' *Merrill v. Yeomans,* 94 U.S. at 573-74. The use of a dictionary definition can conflict with that directive because the patent applicant did not create the dictionary to describe the invention. Thus, there may be a disconnect between the patentee's responsibility to describe and claim his invention, and the dictionary editors' objective of aggregating all possible definitions for particular words.

415 F.3d at 1320-1321.

The wisdom of the preceding *Phillips* analysis is readily apparent from the circumstances of the present investigation. Here, the "abstract" dictionary definition of "main, central, or principal part" offers a claim construction that simply does not advance an understanding of the claim term "body." Indeed, one wonders what KVM automatic switch, or even any other invention, does not have a "main, central or principal part." This definition is proof of the inherent analytical weakness in turning to a dictionary for claim construction at the expense of examining the patent itself. In that regard, as discussed below, the specification of the '112 patent casts considerable light on the patentee's intended meaning of "body," thus providing valuable knowledge as to what the patentee intended by his invention.

As stated by the Court in *Phillips, supra,* the specification of the patent must be consulted in all cases to decide the meaning of claim terms. Thus, even if a "dictionary definition" of a disputed claim term were appropriate, that can only be determined by first consulting the specification to find out whether the patentee has sought to impart a special meaning to the term.

Here, complainant's expert, Dr. Baker, testified that he did just the opposite. Dr. Barker started with *Merriam Webster's Collegiate Dictionary* and only after adopting the dictionary definition did he consult the '112 patent, specifically the claim language, "to see if there is more

insight to what a body means." Barker Tr. 465-466. Dr. Barker simply started off "on the wrong foot" and by having begun his claim construction by accepting outright the dictionary definition, without allowing for any consideration of the patent language, his claim construction was destined to fail.[12]

Thus, it is quite clear that ATEN's and Staff's claim construction of the term "body" suffers from their failure to consider the patent's specification. While Staff correctly notes that there is no indication in the specification that the patentee sought to be his own lexicographer (a canon of construction often used by the Federal Circuit), a substantial portion of the of the '112 patent specification discusses the protective purpose and the weather-resistance feature of the "body" used in the claimed invention. *See* Background and Summary portions of the specification discussed, *supra.* This discussion occupies a prominent position in the specification, even in those portions of the '112 patent that do not pertain to the preferred embodiment. Accordingly, it was error to dismiss the specification's treatment of "body" in construing this claim term.

While ATEN and Staff fall short of the mark in offering a proper construction of "body," so too do Belkin and Emine. The construction offered by respondents (*i.e.,* "a single integral enclosure that is not assembled from separate parts, such as by means of screws") is more limiting than the '112 patent claim language and the specification allow. *See* Belkin Br. at 10; Emine Br. at 7.

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[12] Respondents' expert, Dr. Min, testified that outside the context of the '112 patent, he would not have used the term "body" to refer to any of the prior art boxes used in consumer electronics or communications equipment. Thus, consistent with Federal Circuit case law, Dr. Min consulted the specification to determine what the patentee meant by use of the term "body." Min Tr. 1066-1067.

In that regard, even though the specification admittedly touts the benefits of unitary plastic injection molding over prior art boxes constructed with multiple pieces, held together by screws, there is no clear prohibition against the use of a screw, or the use of multiple pieces, to construct the "body" of the KVM automatic switch. There is no explanation as to why the use of a screw, or multiple pieces of material, would be unsuitable for the claimed invention, nor is there evidence to that effect.[13] Indeed, even respondents admit that the specification does not necessarily limit the body to one made by injection molding.

As respondents' expert testified, even though the only examples of a body provided in the '112 specification are made through a plastic injection molding process, and even though the Background and Summary portions of the specification discuss the benefits of a claimed body made through injection molding, one of ordinary skill would know how to construct a body that would meet the purposes of the specification without plastic injection molding. *See* Min Tr. 1067.[14]

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[13] Similarly, during the prosecution of the '112 patent, the examiner cited prior art whose purported body was not manufactured through plastic injection molding, or even constructed of a single piece of material. *See* JX-2 ('112 Patent Prosecution History).

[14] Dr. Min testified more than once that injection molding is not required, including the following:

> Q. And, again, Dr. Min, does your definition of body in the '112 patent limit the body to one that is made integrally injection molded?
>
> A. No, in fact, as I just described to you, Mr. Adkins, and when I read the '112 specification and patent itself, I read it, and I said this could work. This three time injection molding technique could work to provide that protection that the inventor was keen on, and a cable can be attached directly and permanently and provide all the protection.

(continued...)

As evidenced in the portions of the patent specification quoted, *supra,* the patentee explains the importance of the "body" to the claimed invention, and the superiority of the claimed body over the metal box switch prior art. An example of the metal box switch prior art is provided, *supra*, for comparison to the claimed invention.

The metal box switch prior art was susceptible to humidity and damage, thus needing repair or maintenance. The specification states that in the claimed invention, in contrast to the prior art, "the main body has an integrally injection-molded plastic enclosure to provide good weather-resistence, impact resistence, and absolute protection of the internal circuit board and circuits thereon." *See* CX-7 & RX-1, col. 1, ll. 41-45; *see also, id.,* col. 1, ll. 8-10, 26-32, 46-63 (describing the advantages of the body used in the claimed KVM switch in contrast to the more easily damaged and permeable boxes used in prior art switches).[15]

While there is no indication that the use of an embodiment other than this preferred embodiment can provide for "good weather-resistence, impact resistence, and absolute

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[14] (...continued)

> But as one of ordinary skill in the art, I saw, yeah, there are other ways, but that would be a good idea what is described in the '112 patent.

Min. Tr. 1100-1101.

[15] The Background and Summary portions of a specification are often a clear and reliable guide to understanding the meaning of claim terms and the scope of the claimed invention. *See, e.g., SafeTCare Mfg. Co. v. Tele-Made, Inc.*, 497 F.3d 1262, 1269-70 (Fed. Cir. 2007) ("Background" and "Summary of the Invention" used to distinguish the prior art, and to require a "a pushing force, not a pulling force." "[W]e are not in danger of importing any limitations from the specification into [the] Claim .... Rather, we rely on the specification merely to understand what the patentee has claimed and disclaimed."); *see also, In re Gabapentin Litig.*, 2006-1572, slip op. at 21-22, 2007 U.S. App. LEXIS 22530 (Fed. Cir. Sept. 21, 2007) (claims must be read in view of the specification; "Summary of the Invention" portion of the specification supported the district court's construction of disputed claim limitations).

protection" to the internal circuit board, no claim asserted by ATEN even refers to plastic injection molding. *See* Min testimony at n.14, above. As argued by complainants, "dependent claim 3 requires the circuit protecting layer of the body to be of injection-molded plastic, thus implying that other embodiments of the circuit protecting layer are not made of injection-molded plastic." ATEN Br. at 12-13. Other non-asserted claims depending from claim 1 also refer to plastic injection molding. *See* CX-7 & RX-1, col. 3, ll. 35-58.[16]

Moreover, there is no statement in this general discussion concerning the requirements of the body that either highlights or otherwise discusses a preferred embodiment of the claimed invention.[17] The discussion of the body occurs in the Background and Summary portions of the specification, all with explicit reference to "the present invention." The portions of the specification illustrating and focusing on the "preferred embodiments" follow. The patentee's statements are necessarily read to apply to any embodiment of the claimed or "present" invention.

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[16] Claim differentiation is "not a hard and fast rule of construction." *Kraft Foods, Inc. v. Int'l Trading Co.,* 203 F.3d 1362, 1368 (Fed. Cir. 2000). However, an independent claim is normally expected to be broader than its dependent claims. The independent claim is not expected to require the limitations added in the dependent claims. *Dow Chem. v. United States,* 226 F.3d 1334, 1341-1342 (Fed. Cir. 2000) (applying the doctrine of claim differentiation and concluding that an independent claim should be given broader scope than a dependent claim to avoid rendering the dependent claim redundant).

[17] Respondents' reliance upon *Alloc, Inc. v. United States Int'l Trade Comm's*, 342 F.3d 1361 (Fed. Cir. 2003), is misplaced. In that case, the term "play" (as in the expression "play in the joints") was essentially read into asserted patent claims having to do with locking, grooved laminate flooring – even though the term was never explicitly used in any claim, and all the illustrations requiring play occurred in connection with particular embodiments of the specification. In this instance, however, the required features of the "body" are stated in the '112 patent specification, and do not occur in connection with any particular embodiment.

Accordingly, the claim term "body" is construed to mean "an enclosure that provides good-weather resistence, impact resistence, and absolute protection of the internal circuit board and circuits thereon." The claimed invention, as limited by the "body" limitation of the independent claims, cannot be read on the prior art boxes identified in the '112 patent specification as unsuitable for the claimed KVM switch.

(2) "fixedly attached"

The claim term "fixedly attached" appears explicitly or by reference in all the asserted claims except claim 21. JX-1. As was the case with the claim term "body," the claim term "fixedly attached" is not a term of art. *See* ATEN Br. at 14; Belkin Br. at 21. *See also,* Barker Tr. 481-482; Min Tr. 1117.[18]

ATEN submits that the term "fixedly" means "securely" and that the term "attach" means "brings into association." Combining these terms, ATEN further submits that the claim term "fixedly attached" means "securely brought into association." ATEN Br. at 14 (quoting, *inter alia, Merriam-Webster's Collegiate Dictionary* at 79, 440 (10th ed. 2001)(CX-227)).[19]

Belkin submits that the term "fixedly attached" means "permanently secured." Belkin Br. at 24. As support for this proposition, respondent contrasts Figures 2 and 3 of the '112 patent, which depict cables permanently joined to an injection molded body, with Figure 1, which shows a prior art switch representative of earlier known KVM switches that use connector ports to attach and detach cables from a box. Belkin Br. at 22. In addition, Belkin relies upon excerpts

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[18] Neither Emine, nor Staff, suggest that "fixedly attached" is indeed a term of art.

[19] ATEN states that respondents have described the meaning of this phrase as the "jugular" issue. *See* Tr. 896. ATEN "agrees that this issue is of premier importance to this case both for infringement and validity." ATEN Br. at 14.

from the specification that, in respondent's view, "demonstrate that cables as used in the '112 patent are attached to the body *without* connector pieces between the cables and body." Belkin Br. at 23 (emphasis in original); JX-1, Abstract, 1:46-48, & 2:23-27. Finally, Belkin notes that the examiner "implicitly equated" the terms "fixedly attached" and "to permanently secure" by using both to describe the prior art Krakovich reference. Belkin Br. at 23-24.

Emine agrees that "fixedly attached" means "permanently joined together." Emine Br. at 9; Min Tr. 1117-1118; RDX-48. Like Belkin, Emine relies upon a contrast of Figures 2 and 3 with Figure 1 (JX-1), the Krakovich prior art, and the fact that the specification that the cables are "directly extended from the main body." *See* JX-1, Abstract & JX-1, Summary; *see also,* Min. Tr. 1118-1119. According to respondent, this reference in the specification indicates an absence of any connector piece between the cables and the body. Emine Br. at 10.

Staff finds no support to limit the definition of "fixedly attached," so as to require "permanence" as argued by respondents. Staff Br. at 13. Staff notes that while the examiner in one instance did characterize a single specific fixed attachment as permanent (JX-2), the word "permanent" is not used in the patent or prosecution history. Staff Br. at 13. Nor, in Staff's view, is permanence "implied or required" by the use of the term "fixedly attached" in the patent. *Id.*[20]

Accordingly, Staff finds ATEN's construction of "securely brought into association" to be "more accurate and consistent with the term's plain and ordinary meaning." Staff Br. at 13. Still, Staff did not find ATEN's construction to be "very instructive." *Id.* Because a "secure"

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[20] Staff also notes that the inventor, Kevin Chen, testified that he did not intend "fixedly attach" to require permanence. Chen Tr. 152.

electrical connection is required in any event for the switch to operate, Staff suggests that ATEN's use of "secure" in place of "fixed" is overly broad. Staff Br. at 13-14. (It "would, in fact, render the term "fixedly" superfluous, to the extent that a secure connection is inherent in the attachment of components that continue the electrical signal." *Id.*)

Thus, Staff submits that the plain and ordinary meaning of the term "fixedly attached" should apply and that such plain and ordinary meaning is "fastened, attached, or placed so as to be firm and not readily movable." Staff Br. at 14, citing *Random House College Dictionary*, Revised ed. (1980) (SX-2). Indeed, Staff notes that complainants' expert, Dr. Barker, concurs with this construction. *Id.*; Barker Tr. 483-484.

Despite the similarities between ATEN's and Staff's construction of "fixedly attach," Staff notes that ATEN's application of that term "strays far off point." Staff Br. at 14, n.8. In that regard, it takes issue with Dr. Barker's testimony that the fixed attachment of the cables is to the "body," rather than to the "circuit board." Barker Tr. 1384-1386. Staff argues that Dr. Barker's position is strained and inconsistent," given the fact that he has admitted "(1) that the patent does not require the attachment between the cables and the body to be a direct one (Tr. at 831-32) and (2) that the circuit board, which he identifies as the point of cable attachment in the prior art, is inside the device and itself attached to the body in all examples of prior art (Tr. at 1425)." *Id.*

It is the finding of this Tribunal that the claim term "fixedly attached" is construed to mean "fastened, attached, or placed so as to be firm and not readily movable." There is no requirement that the attachment be permanent.

(3) "connector plugs"

The term "connector plugs" is recited in claims 1, 19, and 21. JX-1. ATEN argues that the term "connector plugs" means "conductors such as pins used to make an electrical connection." ATEN Br. at 17; Barker Tr. 490. ATEN submits that this construction is consistent with the dictionary meaning of the term as it appears in *The Authoritative Dictionary of IEEE Standard Terms* at 834 (7th ed. 2000) (definition of "plug"). *Id.* Complainants argue that this construction is proper because the '112 patent discloses that cable-connected connectors 31, 32, and 33 are adapted to plug into corresponding connectors on the computer. *Id.*; JX-1.

Respondents' expert testified that the term "connector plug" is a widely used term of art. Min Tr. 1126-1127. In that regard, Dr. Min described a connector plug as the "male insertion part that connects to the connector port." Min. Tr. 1127; CDX-524 & RDX-61. Thus, respondents argue that a "connector plug " is a male insertion part that connects to the "connector port," a claim term discussed below. *See* Emine Br. at 10-11.

Staff is of the view that "[o]nce again, Respondents' definition overly limits the plain and ordinary meaning of the claim term." Staff Br. at 17. Citing the testimony of Dr. Barker (Tr. 491), Staff states that neither the intrinsic record, nor a sampling of technical dictionary definitions, suggest that the gender of the plugs is male. *Id.* Nonetheless, Staff also is critical of the definition advanced by ATEN, noting that it likewise is too broad and that it "does not offer much instruction in the context of the '112 patent or the field of KVM switches." *Id.*

Accordingly, Staff submits that in the context of the '112 patent the plain and ordinary meaning of the term "connector plug" is "a device, usually associated with a cord, that by insertion in a jack or receptacle establishes connection between a conductor or conductors

associated with the plug and a conductor or conductors connected to the jack or receptacle." Staff Br. at 18, citing *IEEE 100 Dictionary of IEEE Standards Terms*, 7th ed. (2000) (CX-229). Furthermore, Staff notes that this construction of :connector plugs" is supported by both complainants' and respondents' experts. *Id.*; Barker Tr. 490-491 & Min Tr. 1128-1129.

Finally, Staff asserts that the specification, while not using the term "connector plug," uses the terms "plug" or "plugging" in referring "to the connections made by the user in connecting the end of the cables extended from the peripherals into the externally-provided ports of the switch, as well [as] the connection made between the 'cable-connected connectors' and the computers." Staff Br. at 18, citing JX-1, Col. 1, ll. 64-67, Col. 2, ll. 64-65, & Col. 3, ll. 2-6. Thus, Staff concludes that as discussed in the specification, the connector plugs do not require gender. Staff Br. at 18.

It is the opinion of this Tribunal that the construction offered by Staff is correct. Accordingly, it is found the term "connector plug" is construed to mean "a device, usually associated with a cord, that by insertion in a jack or receptacle establishes connection between a conductor or conductors associated with the plug and a conductor or conductors connected to the jack or receptacle."

(4) "connector ports"

The term "connector ports" is recited in asserted claim 1 ("a set of connector ports electrically coupled to the switching circuit"), claim 14 (""the set of connector ports contains a peripheral port to a computer peripheral," claim 15 ("wherein the set of connector ports contains a keyboard port to connect a keyboard," claim 16 ("wherein the set of connector ports contain a mouse port to connect a mouse," claim 17 ("wherein set of connector ports contains a video port

to connect a display," and claim 21 (""providing a plurality of connector ports on a surface of the body, the plurality of connector ports electrically coupled to the switching circuit"). JX-1.

ATEN argues that, consistent with the claims and the patent specification, the term "connector ports" must be construed to mean "connector for input or output connections between peripheral devices and computers." ATEN Br. at 16, quoting *The Authoritative Dictionary of IEEE Standard Terms,* at 844 (7th ed. 2000).

Respondents argue that "connector port" is a widely used term of art described by Dr. Min as female openings on the surface of the body that signal conductivity and act as a tension barrier for the circuit. Emine Br. at 10; Min Tr. 1123 & RDX-57. Respondents further argue that the specification "strongly supports" their construction of the term "connector port" inasmuch as it repeatedly describes "'connector ports' that are 'provided *on the peripheral [or external] walls*' of the switch. Emine Br. at 10; JX-1 (emphasis and bracketed material in original). In addition, respondents note that Figures 1 through 3 of JX-1 "show connector ports only on the *external walls* of the box." *Id.* (Emphasis in original). [21]

Staff construes "connector ports" to mean "a coupling device that provides a point of access into a computer (such as the serial and parallel ports on the back of most PCs), network, or other electronic system." Staff Br. at 16. As support for this construction, Staff cites the *Modern Dictionary of Electronics,* 7th ed. (1999) (SX-3). *Id.*

Staff finds respondents' construction to impermissibly limit the plain and ordinary meaning of the claim term. It states that "[n]either the specification, the prosecution history, nor

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[21] Belkin and Emine also rely upon the testimony of Dr. Min that before 2002, he had never seen any connector ports that were not on the surface of the body of a communications equipment or network device. Emine Br. at 10; Min Tr. 1124-1125.

the other asserted claims specify that computer ports must be on the surface of the body." Staff Br. at 15. In addition, Staff states that although it may be the case that a connector port on a KVM switch may provide a "tension barrier," as respondents assert, by preventing tension applied on the cable from being transmitted into the body, "there is no evidence that that should be part of the definition or a necessary limitation of the claims." Staff Br. at 15-16, citing Barker Tr. 489.

Staff likewise finds a problem with the construction advanced by ATEN. While it concedes that complainants' construction (*i.e.*, "connector for input or output connections between peripheral devices and computers"), is a "plausible construction" of the claim term, Staff states that this definition is not so easily applied to the invention. In Staff's view, this is a problem "because the KVM switch of the invention connects peripheral devices and computers to each other, and the definition does not say anything about how 'connector ports' would apply to this intermediate switching device." Staff Br. at 16.

Finally, Staff asserts that its construction is consistent with the specification ("externally provided with connector ports," at Col. 1, ll. 39-41 and "connector ports provided on external walls thereof," at Col. 2, ll. 23-27). Staff Br. at 16-17. In Staff's view, these uses of the term "connector port" confirm that the port is intended to be, consistent with its plain and ordinary meaning, the point of access into the electronic system of the switch for cables extending from the peripherals. Staff Br. at 17.

Once again, Staff's criticisms of the construction offered by ATEN, Belkin, and Emine are well taken. Accordingly, it is the finding of this Tribunal that the claim term "connector ports" is construed to mean "a coupling device that provides a point of access into a computer

(such as the serial and parallel ports on the back of most PCs), network, or other electronic system."[22]

(5) "cable"

ATEN submits that one of ordinary skill in the art would understand that in the context of the '112 patent a "cable" is used "to transmit signals between the switching circuit and the computer." ATEN Br. at19; Barker Tr. 473. Thus, complainants further submit that one of ordinary skill understands such a "cable" to be:

> A usually flexible (but sometimes rigid) medium via which electrical power or signals are transferred. Although the term is occasionally applied to a single conductor, especially when it is a braid or weave of a number of wires, cable usually means a bundle of separate, insulated wires or strands of fiber optic material.

ATEN Br. at 19, quoting *The Illustrated Dictionary of Electronics* at 93, 8th ed., McGraw-Hill (2001) (CX-433).

ATEN notes that while this construction is consistent with the usage of the term in the patent, neither the dictionary, nor the patent, expressly states how, or where, a "cable" ends. *Id.* at 19.[23] ATEN answers that inquiry (*i.e.,* how and where a cable ends) by stating that "[i]n common parlance in the art, when one refers to a cable, it includes connectors." *Id.*; Barker Tr. 477-478.

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[22] Indeed, even Dr. Barker (Tr. 488-489, 830) and Dr. Min (Tr. 1125-1126) agree with Staff's construction.

[23] By way of example, ATEN states that independent claims "1, 18, 20 and 21" specify connector plugs on one end of each computer cable with the other end being electrically coupled to the switching circuit. (ATEN's identification of the independent claims is wrong. There are only two independent claims, claim 1 and claim 21.) However, the claims do not identify the means by which the cable is coupled to the circuit. ATEN Br. at 19; Barker Tr. 475.

As further support for this proposition, complainants state that the cables that Emine orders for the accused products come with connectors attached (JX-27; J. Chen Dep. 60). ATEN Br. at 19. ATEN also states that "Mr. Chacon, whom Belkin identified as on[e] of the three most knowledgeable people at Belkin regarding the design and development of the accused products (CX-0048C at 8-10) but whom Belkin did not call to testify at trial, testified in deposition that the connector end of the cable is part of the cable." ATEN Br. at 19-20; JX-15C, M. Chacon Dep. Tr. 42.

Finally, complainants cite to prior art to further support its position. In that regard, complainants note that the Cybex Commander User Guide (RX-525C) refers to a 25-pin "D" connector at one end of the cable. Also, the Thomas patent, considered by the examiner, references "alternative ends for other types of mice and keyboards" such that Dr. Barker testified that the cable is understood to have connectors on the ends allowing it to connect to connector ports. ATEN Br. at 20; Barker Tr. 477.

Belkin notes that while Figures 2 and 3 in the '112 patent disclose "signal cables," "mouse cable," "keyboard cable," and "video cable," the term "cable" is not defined in the specification of the patent. Belkin Br. at 20; *see* JX-1. Emine agrees. Emine Br. at 11. For a definition of this claim term, respondents turn to their expert, Dr. Min. Dr. Min testified that one of skill in the art in 2002, would construe "cable," a term of art, to mean "one or more wires bundled together by a single continuous protective cover." *Id.*; Min Tr. 1109-1110; RDX-53.

Belkin argues that this construction is consistent with the specification and claims of the '112 patent. For example, it notes that the Abstract discusses "cable-connected connectors" (JX-1 at Abstract; RDX-54) as does the Summary of Invention section of the patent specification

(JX-1 at 1:46-47; RDX-55) suggesting that there are cables separate from connectors in the patent. Belkin Br. at 20. For its part, Emine argues that Dr. Min's definition of "cable" is also supported by *The Authoritative Dictionary of IEEE Standards Terms* (7th ed. 2000) (RX-542C). Emine Br. at 11.

Staff notes that the term "cable" appears, or is incorporated by reference, in every asserted claim of the '112 patent. Staff construes this claim term to mean "strands of insulated electrical conductors laid together, usually around a central core, and surrounded by a heavy insulation." Staff Br. at 9-10; SX-1.[24]

As support for this alternative construction, Staff cites to the testimony of complainants' expert, Dr. Baker ("I am very comfortable using this dictionary definition of the term." Barker Tr. 479-481), as well as to the testimony of respondents' expert, Dr. Min. ("[I]t's a reasonable definition ... it's not a bad definition." Min. Tr. 1360-1361).

[24] Initially, Staff took the position that the plain and ordinary meaning of the term "cable" to a person of ordinary skill in the art at the time of the invention to mean "[a] stranded, ropelike assembly of wire or fiber." It based this construction upon the definition of the claim term as it appears in the *McGraw-Hill Dictionary of Scientific and Technical Terms*, 5th ed. (1994) (SX-1). While Staff maintains that the evidence in this investigation supports its original construction (citing Barker Tr. 864-865; Min Tr. 1116), it states that "even more so, the record supports an alternative claim construction for the term suggested for the first time at trial, with which all parties agreed." Staff Br. at 10. That alternative construction is the one set forth above.

In Staff's view, this construction is consistent with the term as it appears in the specification,[25] as well as with Figures 2 and 3 of the '112 patent "which illustrate external cables '**11**.'" Staff Br. at 11. Thus, Staff concludes:

> According to these uses of the term and consistent with the Staff's proposed construction of the term, the "cables" are the flexible strands of electrical conductors laid together around a core and surrounded by insulation (though not necessarily a single or continuous protective covering) that connect to the body or ports on the switch end, and terminate in "cable-connected connectors" on the computer side and a keyboard, video display, and mouse on the peripheral side.

Id.

Nonetheless, Staff notes that while the parties can agree on the construction of the term "cable," "the application thereof is disputed." *Id.* In that regard, it notes that Dr. Min testified that "cable" does not include the connectors. Min Tr. 111-1114. Staff further notes, however, that Dr. Barker's application of the term is "inconsistent and hard to follow." Staff Br. at 11-12. As an example, Staff states that to find infringement of certain of the accused products,

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[25] In that regard, Staff cites the following passages:

> The automatic switch of the present invention also includes more than one or two sets of cable-connected connectors directly extended from the main body and electrically connected to the internal circuit board via signal cables. Col. 1, ll. 45-49.
>
> * * * * *
>
> Cables can therefore be more easily plugged or unplugged in or from the main body **20**. Col. 2, ll. 64-65.

Staff Br. at 11.

Dr. Barker found it necessary to refer to an entire "cable assembly," rather than to the claim term "cable." Staff Br. at 12.[26]

While differences as to application of the claim term may exist, for present purposes of claim construction, this Tribunal finds that the term "cable" means "strands of insulated electrical conductors laid together, usually around a central core, and surrounded by a heavy insulation."

(6) "molded attachment element"

The claim term "molded attachment element" appears only in asserted dependent claim 12, in the context of fixedly attaching cables to the body of the switch. In that regard, claim 12 provides: "The switch of claim **1**, wherein the plurality of cables are fixedly attached to the body through a molded attachment element." *See* CX-7 & RX-1, col. 3, ll. 56-58 (claim 12). In essence, "the molded attachment element" is one manner in which the patent claims that a fixed attachment can be made between the cables and the body of the KVM switch.

ATEN states that because the term "molded attachment element" is not a term of art (Barker Tr. 492-493; Min Tr. 1129), the "customary meaning of 'molded' and 'attachment' apply." ATEN Br. at 18. Accordingly, ATEN construes the claim term "molded attachment

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[26] In Staff's view, "The tenuousness and incredibility of Dr. Barker's application of his claim construction for 'cable' was illustrated particularly poignantly at trial when Respondent's counsel, Mr. Dickerson, unscrewed the thumbscrew connector in the Belkin CA version 2 product (CPX-7), the cabling fell to the floor, and Dr. Barker remarked, '[t]he cable that is on the floor is not the same cable that I'm talking about' (Tr. at 760) – a position he takes because he is trying to argue that a portion of the cable remains fixedly attached to the body despite the removal of the external cables at the thumbscrew attachment. *See, e.g.,* Barker, Tr. 767-68 (opining that the point where the cables are attached is not at the thumbscrew interface). This position is unsupported, inconsistent, and not credible, especially given that, with regard to the Belkin version 3 (discussed *infra*) Dr. Barker admits that he considers the thumbscrew attachment to be the point of fixed attachment of the cables to the body. *See* Barker Tr. at 597." Staff Br. at 12.

element" to mean "a molded component that brings one part into association with another part." *Id.*,citing *Miriam-Webster Collegiate Dictionary*, 10th ed. 2001, (CX-227); Barker Tr. 493.

Respondents construe this claim term as meaning "a liquified solid that is permanently joined to an object upon cooling." Belkin Br. at 26 & Emine Br. at11; Min Tr. 1129-1130; RDX-63.

Staff adopts complainants' construction. Staff Br. at 19. First, Staff rejects respondents' construction because they once again have impermissibly read into the claim term a limitation of permanence. *Id.* In that regard, Staff notes that this proposed limitation, *i.e.*, permanence, does not appear in the patent or the prosecution history except for the examiner's single mention to a permanent fixed attachment in the Krakovich reference. JX-2. In Staff's view, this mention by the examiner "only shows one example of a fixed attachment, not a limitation in the claim." *Id.; see* Barker Tr. 495 ("I'm fully in agreement with Staff.").

For the reasons articulated above, Staff's criticism of respondents' construction of the claim term "molded attachment element" is well-taken. Accordingly, it is the finding of this Tribunal that "molded attachment element" means "a molded attachment component that brings one part into association with another part."

(7) "integrated into" and "integrating . . . into"

Claims 13 and 21 of the '112 patent, respectively, claim a switch with cables "integrated into the body" and "integrating [cables] into the body." JX-1. Specifically, claim 13, which depends from claim 1, recites "a first end of each of the plurality of cables is integrated into the body." Independent claim 21 recites a step of "integrating a first computer cable and a second computer cable into the body."

ATEN submits that the terms "integrating" and "integrating into"are not terms of art, and that neither the claim language nor the specification purport to give the terms any specialized meaning. ATEN Br. at 21; Barker Tr. 497. Thus, ATEN turns to the plain and ordinary meaning of "integrated" to construe the claim term as "formed into a unified whole." *Id.* at 21-22 , citing *Merriam-Webster's Collegiate Dictionary*, at 650 (11th ed. 2003); Barker Tr. 497; CDX-527. "Thus, cables that are integrated into the body form a single structure." ATEN Br. at 22; Barker Tr. 497.

Respondents provide a narrower construction, stating that "integrated" means "blended into without clear boundary and cannot be disassembled." Belkin Br. at 27 & Emine Br. at 12; RDX 65 & 67. In pursuing this construction, Belkin argues that the specification mentions "injection-molding" five times and that this could only mean "blended into without clear boundary and cannot be disassembled." Belkin Br. at 28.

Staff takes the position that the construction offered by Dr. Barker ("formed into a unified whole") is not specific enough inasmuch as it would render the term identical to "fixedly attached." Staff Br. at 20; Min Tr. 1363-1364. Accordingly, Staff construes the term "integrated" as "formed into a unified whole that is inseparable without disassembling the whole." *Id.*[27]

It is the finding of this Tribunal that the claim terms "integrated into" and "integrating ... into" mean "formed into a unified whole that is inseparable without disassembling the whole."

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[27] Staff notes that while this is the claim construction that complainants advanced in their Pre-Hearing Statement (at 22), it is not the construction offered by their expert, Dr. Barker, at hearing. Staff Br. at 20-21.

This construction takes into account the specification's multiple references to injection-molding, but stops short of the unnecessary limitation that the unified whole could not be disassembled.

IV. 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.*, 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 contain 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,* 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 144, 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 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*, 125 S.Ct. 2829, 162 L.Ed.2d 865 (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*).

In other circumstances, a patentee may obtain coverage of equivalents unforeseeable at the time of the amendment and beyond a fair interpretation of what was surrendered, or for aspects of the invention that have only a peripheral relation to the reason the amendment was submitted. *Festo*, 535 U.S. at 738. The patentee must show that at the time of the amendment, one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent. 535 U.S. at 741.

B. The Accused Products

As earlier noted, the parties have stipulated that the accused products form six representative groups. Four of the groups consists of products manufactured by Belkin. The remaining two groups consist of products manufactured by Emine. *See* Joint Stips. at 1-2; Second Joint Stip. at 2.

In addition, for each group the parties have designated an accused device that is representative of all of the accused devices within that particular group. Thus, if the representative accused product is found to have infringed the '112 patent, then all accused devices within the group are also found to have infringed the patent. The same reasoning applies in the event that the accused device is found not to have infringed the patent.

1. Belkin Accused Products

Belkin Group 1

Belkin Group 1 includes the following products in KVM K/L Models: F1DK102P (versions 1 and 2); F1DK102Pv (versions 1 and 2); F1DK102U (versions 1 and 2); F1DL102P (versions 1 and 2); and F1DL102U (versions 1 and 2). Joint Stips. at 1, ¶ 1. These products are referred to as the Belkin "Compact" or "CA" Version 1 KVM products and the Belkin "Compact" or "CA" Version 2 KVM products.

The Belkin CA Version 1 products are represented by CPX-37. This KVM switch has a clamshell casing with ports for KVM peripherals on the outer wall of the switch. Two cables extend from a molded strain relief element attached to the casing around the switch. These cables have cable-connected connector plugs to electrically connect the switch to various computers. *See* CPX-37; *see also,* Staff Br. at 24.

The Belkin CA Version 2 products are represented by CPX-7. The Belkin CA Version 2 products are KVM switches with a clamshell casing. They have ports for KVM peripherals on the outer wall of the switch, as well as a thumbscrew connector piece on the outer wall of the switch that connects to the mating half of that thumbscrew connector. The thumbscrew connector has two cables extending from a molded strain relief element, which cables have cable-connected connector plugs to electrically connect the switch to various computers. *See* CPX-7; *see also,* Staff Br. at 28.

The infringement analysis of the CA Version 1 and the CA Version 2 accused products is set forth below.

Claim 1

It is found that both the Belkin CA Version 1 products and the CA Version 2 products do not literally infringe claim 1. Specifically, these accused devices do not meet the limitation of the claim term "body." In that regard, this claim limitation is as follows: "A switch comprising: a body." JX-1, col. 3, ll. 19-20.

As discussed in the claim construction portion of this Initial Determination, *supra*, the claim term "body," as it appears in the '112 patent, is construed to mean "an enclosure that provides good weather-resistence, impact resistence, and absolute protection of the internal circuit board and circuits thereon." This construction of the term "body" is critical to this investigation. Yet, whether the result of an erroneous claim construction, an oversight, or simply a tactical decision, complainants (and Staff) have failed to build an evidentiary record that, given this construction of "body," would support a finding of infringement of the Belkin Group 1 Compact KVM products as to claim 1.

This evidentiary dilemma that ATEN (as well as Staff) finds itself in is not surprising though inasmuch as complainants (and Staff) expansively construe "body" to mean "the main, central, or principal part."[28] Moreover, at the hearing, the two parties directed their efforts exclusively toward building an evidentiary record that fit within their definition of "body." No attempt was made by either to introduce evidence that would support an alternative, and less expansive, construction of "body." Indeed, that is exactly what happened here as the term "body," as it appears in the '112 patent, is construed to mean "an enclosure that provides good-weather resistence, impact resistence, and absolute protection of the internal circuit board and circuits thereon."

Indeed, in their post-hearing briefs, other than with respect to claim construction, complainants barely even mention the term "body."[29] For example, ATEN states that "[e]very one of Respondents' accused KVM switches has a *body*, a switching circuit, a set of connector ports on the surface of the body, the plurality of cables, and each of the plurality of cables has a plurality of connector plugs required by independent claims 1 and 21." ATEN Br. at 23

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[28] Again, given ATEN's proposed construction that "body" means "the main, central, or principal part," of course respondents' accused products are going to have a body that meets this definition. Indeed, the breadth of this proposed construction begs the question as to whether there can be any automatic KVM switch that does not fall within its reach. But this broadside of a definition tells us nothing about what the patentee claims to have invented. It is only by looking at the '112 patent, in particular the specification, that we can properly construe the term "body" in a way to understand the claimed invention.

[29] This shortcoming may be explained by ATEN's issue misidentification. It argues that "the issue of infringement of claim 1 ... is the question of where the cables are securely attached – as every one of these claims require the cables be fixedly attached to the body." ATEN Br. at 24 (emphasis in original & fn. omitted). To be sure, the claim construction of the term "fixedly attached" is important to this investigation, but it is not the "jugular issue" as anticipated by the parties. *See, e.g.,* ATEN Br. at 14.

(emphasis added).[30]

Thus, the net result of ATEN's failure to properly construe "body" is that it has introduced no evidence into the record to show that the accused devices of Belkin Group 1 (CA Version 1 and CA Version 2) have a body that meets the first claim limitation of claim 1. Specifically, there is no evidence to show that these accused devices have a body that provides "weather-resistence, impact resistence, and absolute protection of the internal circuit board and circuits thereon." Thus, the Belkin CA Version 1 and CA Version 2 products do not literally infringe claim 1.

These accused products, however, do meet the remaining claim limitations of claim 1. The remaining claim limitations (while set forth earlier, bear repeating) are as follows:

> 1. A switch comprising:
>
> * * * * *
>
> a switching circuit contained within the body;
>
> a set of connector ports electrically coupled to the switching circuit; and,
>
> a plurality of cables fixedly attached to and extending from the body, each cable in the plurality of cables having a plurality of connector plugs, wherein each connector plug in the plurality of connector plugs for one of the cables in the plurality of cables are matched a respective connector plug in another one of the cables in the plurality of cables, and wherein the switching circuit switches to connect each of the set of connector ports to one of the plurality of cables.

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[30] Staff also tersely addresses the term "body" in its post-hearing brief (*i.e.*, other than with respect to claim construction). For example, Staff simply submits, "CPX-37 shows that the Belkin CA Version 1 products have an outer casing enclosing the inner circuitry. *See* Barker, Tr. at 512, 514. This is the main or principal part of the switch (body). *See* Min, Tr. at 1359." Staff Br. at 24.

JX-1, col. 3, ll. 19-32.

In that regard, both the CA Version 1 accused devices (CPX-37) and the CA Version 2 accused devices (CPX-7) have a body (albeit one that does not infringe claim 1) consisting of an outer casing that encloses a circuit board. Barker Tr. 512, 514. Thus, the switching circuit is contained within this body. *Id.* The connector ports on a surface of the body receive the peripheral plugs that are electrically coupled to the switching circuit. Barker Tr. 513, 515-517.

In addition, a plurality of cables (two) are attached to, and extend from, the body of the switch so as to be fixedly attached. Barker Tr. 520-522.[31] Through this set of electrical connections, the peripheral ports are electrically connected to each of the plurality of cables by the switching circuit. Also, each of the two cables has attached at its computer end a plurality of cable-connected connectors (*i.e.,* connector plugs) to be inserted into their respective ports on the various computers, and the connector plugs on each of the two cables match those on the other cable. *See* CPX-7 & CPX-37; *see also,* Barker Tr. 512-522, 871.

Thus, the evidence establishes that the Belkin CA Version 1 products and the CA Version 2 products do not literally infringe claim 1 of the '112 patent.

Claim 12

Both the Belkin CA Version 1 and CA Version 2 products are found to practice the limitation of claim 12. In that regard, the cables of the CA Version 1 products are "fixedly attached" to the body of the switch through a molded component, *i.e.,* the strain relief molded attachment element, which is held in place by the walls of the body. *See* Barker Tr. 523.

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[31] In the CA Version 2 KVM products (CPX-7), the attachment takes place by means of thumbscrews. This thumbscrew attachment satisfies the "fixedly attached" limitation.

As for the CA Version 2 products, the cables are "fixedly attached" by means of thumbscrews. The cables terminate at the thumbscrew connector and thus, the cable connects to the body of the switch. The representative exhibit for the CA Version 2 products (CPX-7) shows that the thumbscrew connector brings the cables into association with the body via a connector port in such a way that the cables cannot be readily moved. The cables, therefore, are "fixedly attached." *See* Min. Tr. 1111, 1115, & 1149; Barker Tr. 721 (agreeing that thumbscrew connectors could accomplish "a fixed attachment"); *see also,* n.31, *supra.*

Claim 13

The Belkin CA Version 1 products are found to literally practice the added limitation of claim 13 because the ends of these accused products are formed into a unified whole, *i.e.,* they are integrated into the body and they cannot be separated without disassembling the whole body. *See* Barker Tr. 524, 837 & 851.

The CA Version 2 products, however, do not literally infringe claim 13. As is evidenced by CPX-7, the thumbscrew connector does not integrate the cables into the body as is required by claim 13. Thus, the cables are separable from the body of the switch without disassembling the whole body, or in any way disrupting the integrity of the switch. Also, there is also no finding of infringement as to the CA 2 Version products under the doctrine of equivalents.

Claims 14 through 20

Claims 14 through 20 depend from claim 1. The evidence establishes that all of the limitations of these claims are practiced by the Belkin CA Version 1 and CA Version 2 products. In that regard, CPX-37 (CA Version 1) shows that the set of connectors on the wall of the switch includes ports to connect computer peripherals (claim 14), specifically, a keyboard port (claim

15), a mouse port (claim 16), and a video port (claim 17). Also, each cable, or set of cables, couples the switching circuit to a computer (claim 18) and each of the plurality of cables has a keyboard, video, and mouse cable with respective plugs (claim 19). A second cable in the plurality of cables couples the switching circuit to a second computer (claim 20). A similar result obtains for the CA Version 2 products upon examination of CPX-7, the representative accused device. *See* Barker Tr. 550-551, 837.

Claim 21

Claim 21 involves a "method comprising the steps" of claim 1 and claim 13. Given the preceding analysis that both the CA Version 1 and CA Version 2 products do not meet the claim 1 limitation of "body," so too do they fail to meet the claim 21 limitation of "providing a body." Thus, the Belkin Group 1 products do not literally infringe claim 21.

In addition, given the infringement analysis as to claim 13, while the CA Version 1 products meet the limitation in claim 21 as it relates to "integrating" the cables, the CA Version 2 products do not, given their use of thumbscrews.

Finally, both the CA Version 1 and the CA Version 2 products otherwise meet all the limitations of Claim 21. For example, these accused products are made with a casing enclosing the inner circuitry, *i.e.,* the switching circuit. Furthermore, each of the two cables or sets of cables is electrically coupled to the switching circuit at one end, and has a plurality of cable-connected plugs at the other end matching those of the other cable. Also, the plurality of connector ports on a wall of the body that receive the peripheral plugs are electrically coupled to the switching circuit. Through this set of electrical connections, the peripheral ports are electrically connected to each of the plurality of cables and their cable-connected connector plugs

by the electrical switching of the switching circuit. *See* Barker Tr. 524-526; CPX-37.

Accordingly, for the foregoing reasons, it is found that the neither the Belkin CA Version 1 products, nor the CA Version 2 products, infringe claim 21 of the '112 patent.

Belkin Group 2

Belkin Group 2 includes the following products in KVM F/G Models: F1DF102P (versions 1 and 2), F1DF102U (versions 1 and 2), F1DG102P (versions 1 and 2), F1DG102V (versions 1 and 2) and F1DG102W (versions 1 and 2). Joint Stips. at 1, ¶ 2.

The Group 2, Version 1 products are represented by CPX-10. These Version 1 KVM devices are switches with a clamshell casing having ports for KVM peripherals on an outer wall of the switches. Two cables extending from a molded strain relief element are attached to the casing around the switches, which cables, in turn, have cable-connected connector plugs to electrically connect the switches to various computers. *See* CPX-10; *see also,* Staff Br. at 30.

The Group 2, Version 2 KVM products are represented by CPX-5. These accused devices are KVM switches with a clamshell casing having ports for KVM peripherals on the outer wall of the switches, and a thumbscrew connector piece extending from the switches that connect to the mating half of that thumbscrew connector. The mating half of the thumbscrew connector has two cables extending from a molded relief element, which cables have cable-connected connector plugs to electrically connect the switches to various computers.

ATEN submits that "Belkin Group 1/Versions 1 and 2 Compact and Belkin Group 2/Version 1 and 2 Flip are the same, except for a few minor modifications." ATEN Br. at 24-25. Thus, it argues that the infringement analysis should be the same. *Id.* Staff agrees with position, except as to the "fixedly attached" limitation. Staff Br. at 28. On balance, ATEN is correct and

the infringement analysis applied to Belkin Group 1 will also apply to Belkin Group 2.[32]

Applying the infringement analysis of Belkin Group 1 to Belkin Group 2 yields the same results. Accordingly, both the Version 1 products and the Version 2 products are found not to literally infringe claim 1. In that regard, these accused devices meet every limitation of claim 1, *except* the claim limitation that pertains to the term "body." Similarly, neither Group 2 product line infringes claim 21 ("method" of "providing a body") inasmuch as both fail to meet the claim 1 limitation as it relates to the term "body."

Finally, the added limitations of claims 13 through 20 read on the Group 2, Version 1 devices, as well as the Group 2, Version 2 devices, except the latter do not infringe claim 13 (cables "integrated" into the body) and correspondingly do not infringe claim 21 as to the method for integrating the cables.

Belkin Group 3

Belkin Group 3 consists of the Version 3 KVM Switch device, which consists of model number F1DK102U (version 3). Joint Stips at 2, ¶ 3. This accused device was identified at hearing as CPX-8 (a disassembled version of the device).[33] It is a KVM switch with a clamshell casing with ports for KVM peripherals on an outer wall of the switch, and a thumbscrew connector receptacle within the outer casing of the switch body. This thumbscrew connector receptacle connects to the mating half of that thumbscrew connector which, in turn, has two cables extending from a molded strain relief element. These cables have cable-connected

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[32] Thus, the Version 1 analysis of Group 2 tracks the CA Version 1 analysis of Group 1, while the Version 2 analysis of Group 2 tracks the CA Version 2 analysis of Group 1.

[33] Staff cites this exhibit as CPX-6 (the assembled of the device). In either case, the same infringement analysis applies.

connector plugs to electrically connect the switch to

various computers. *See* CPX-6; *see also,* Staff Br. at 32.[34]

The infringement analysis of the Version 3 products (*i.e.,* Group 3) parallels the infringement analysis of the CA Version 2 products (Group 1). Thus, it is found that Version 3 does not literally infringe claim 1 because it does not meet the limitation with respect to the claim term "body." Version 3 does, however, meet all of the remaining claim 1 limitations. It is also found that Version 3 practices the additional limitations of claim 12 and claims 14 through 20, but it that does not practice the limitations of claim 13 and claim 21 for the reasons mentioned in the Group 1 CA Version 2 analysis.

Belkin Group 4

Belkin Group 4 consists of Version 1 of a KVM switch for Mac Mini sold with the name (or model number) F1DM1O2U. Joint Stips. at 2, ¶ 4. This accused product is identified as CPX-40. It is a KVM switch with a casing assembled with screws. It has ports for KVM peripherals on an outer wall of the switch and two cables extending from a molded strain relief element attached to the casing around the switch. The cables have cable-connected connector plugs to electrically connect the switch to the various computers. *See* CPX-40; *see also,* Staff Br. at 31-32.

The infringement analysis for this group of products is the same as that for CA Version 1

[34] The primary difference between the Belkin Version 2 and Belkin Version 3 products is the fact that the thumbscrew connector on the cable mates with threaded metal inserts and an edge card embedded in the body of the switch, rather than with a mating connector piece attached to the body.

(Group 1) and Version 1 (Group 2).[35] Therefore, the evidence shows that the Belkin KVM for Mac Mini does not literally infringe claim 1 because it does not meet the limitation relating to the claim term "body." As in the parallel infringement analyses, this accused device meets all remaining limitations of claim 1. In addition, the evidence shows that the Belkin KVM for Mac Mini literally infringes claims 12 through 20, but not claim 21, inasmuch as it does not meet the limitation of a method comprising the steps of providing a body.

2. Emine Accused Products

Emine has manufactured KVM switches for itself and for other companies. For purposes of this investigation, the accused Emine products are separated into two groups.

Emine Group 1

Emine Group 1 consists of KVM switches known by several products names, depending upon the company making the designation and the country in which the products have been sold. A complete list of the products is contained in the Second Joint Stipulation. The products contained in Emine Group 1 include the following: EM-210CP, EM-210CU, EM-210CPA, and EM-210CUA. Several of these Emine Group 1 products are equivalent to certain identified Belkin, JustCom and RATOC products. Second Joint Stip. at 2, ¶ 11.

The Emine Group 1 KVM products are represented by CPX-9. These KVM switches consist of a clamshell casing with ports for KVM peripherals on an outer wall of the switches. Two cables extend from a molded strain relief element attached to the casing around the switches. The cables, in turn, have cable-connected connector plugs to electrically connect the

[35] Dr. Barker testified that the analysis for the Mac Mini product would be the same because the Mac Mini device has the same elements that are present in the Flip Version 1 and the CA Version 1 products. Barker Tr. 842, 851.

switches to various computers. *See* CPX-9; *see also,* Staff Br. at 33.

The infringement analysis for the Emine Group 1 KVM devices is the same infringement analysis that was applied to the Belkin CA Version 1 products (Belkin Group 1), the Belkin Version 1 products (Belkin Group 2), and the Belkin for Mac Mini (Belkin Group 4). This is so given the similarity of products' elements. *See* Barker Tr. 842, 851.

Accordingly, consistent with the infringement analysis for the Belkin Groups 1, 2, and 4, it is found that the Emine Group 1 products do not literally infringe claim 1 meet because they do not meet the claim limitation as to "body." In all other respects, the Emine Group 2 devices meet the remaining claim 1 limitations. It is further found that the Emine Group 1 products practice the additional limitations of claims 12 through 20 of the '112 patent, but not claim 21 insofar as this claim relates to a method for providing a body.

Emine Group 2

Emine Group 2 consists of KVM switches with the products names EM-210CD, EM-210CDA, EM-210CDP, EM-210CDPA, EM-210CV, EM-210CVA, EM-210CVP and EM-210CVPA. Second Jt. Stip. at 2; ¶ 11.

The Emine Group 2 products are represented by CPX-50. These products are KVM switches with a casing assembled from different parts with screws. The switches have cable-connected KVM ports, with two cables extending from a molded relief strain element attached to the casing around the switches. These cables have cable-connected connector plugs to electrically connect the switches to various computers. *See* CPX-50; *see also,* Staff Br. at 34.[36]

[36] Dr. Barker similarly described the Emine Group 2 devices, noting that they have a "very small compact body." Barker Tr. 616. He also noted that a primary difference with the Emine (continued...)

The infringement analysis for the Emine Group 2 products is the same as that for the Emine Group 1 analysis. Thus, it is found that the Emine Group 2 accused devices do not literally infringe claim 1 because they do not meet the claim limitation of the term "body." These accused devices do, however, meet all of the remaining limitations of claim 1. It is further found that the Emine Group 2 products literally practice the added limitations of claims 12 through 20, but not claim 21.

As noted above, given the failure of the Emine Group 2 products to meet the claim 1 limitation as to "body," the accused devices contained in Emine Group 2 likewise fail to meet the limitation in claim 21 as to the "method" of providing a body. In addition, while the cable-connected ports of the Emine Group 2 products do in fact meet the port limitations of the other claims (*see, e.g.,* Barker Tr. 847), in that they are coupling devices providing a point of access into the electronic system of the switch for the plugs extending from the peripheral devices, claim 21 additionally requires that the ports be located on the surface of the body. Clearly, that is not the case here. Therefore, Emine Group 2 products do not literally infringe claim 21. *See* Barker Tr. 616-617, 735-736; Min Tr. 1371.[37]

V. VALIDITY

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

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[36] (...continued)
Group 2 products is that the set of ports for the plugging in of peripheral devices is at the end of the cable, and not "on the body or near the body." *Id.*

[37] A doctrine of equivalents analysis is inappropriate as to this element inasmuch as it has been waived by ATEN. *See* Barker Tr. 623-626.

patent are presumed to be valid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986). Although a complainant has the burden of proving a violation of section 337, it can rely on this presumption of validity. A respondent must overcome the presumption by "clear and convincing" evidence of invalidity. *Checkpoint Systems, Inc. v. United States Int'l Trade Comm'n*, 54 F.3d 756, 761 (Fed. Cir. 1995).

Respondents argue that the asserted claims of the '112 patent are invalid under the claim construction proposed by ATEN. The Staff argues that the asserted claims are invalid under its own proposed claim construction, and also cites the invalidity testimony of respondents' expert, Dr. Min, as it applies to ATEN's proposed construction. ATEN opposes any finding of invalidity.

Inasmuch as no infringement has been found on the part of any accused product, the question of patent validity is addressed herein only in the alternative. In addition, respondents' and Staff's invalidity arguments are further removed from the ultimate question of violation of section 337 because they are based on alternate proposed claim constructions (*i.e.*, claim constructions not adopted by this Tribunal), or respondents' multiple grounds of patent invalidity (*e.g.*, obviousness in addition to anticipation for the same claims).

Despite the contingent nature of the invalidity questions, a detailed summary of the record evidence concerning the validity question follows. In particular, the discussion below shows that if the Staff's proposed claim construction were adopted (which respondents contest to a lesser degree than ATEN's proposed construction), there is clear and convincing evidence that the asserted claims of the '112 patent would be invalid.

A. Anticipation

Respondents argue that all asserted claims of the '112 patent are invalid due to anticipation under the claim construction proposed by ATEN and, or, Staff. The Staff argues that claims 1, 12 and 14-20 are invalid as anticipated under the claim construction proposed by ATEN and, or, the Staff.[38] ATEN opposes any finding of anticipation.

The grounds for finding a patent claim to be invalid due to anticipation are set forth in 35 U.S.C. § 102. Prior art anticipates if it discloses every limitation of an asserted claim. *See Novo Nordisk Pharm., Inc. v. Bio-Tech Gen'l Corp.*, 424 F.3d 1347, 1354 (Fed. Cir. 2005). The Federal Circuit has observed, "that which would literally infringe if later anticipates if earlier." *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1378 (Fed. Cir. 2001).

Anticipation is a question of fact. *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1343 (Fed. Cir. 2005)("However, without genuine factual disputes underlying the anticipation inquiry, the issue is ripe for judgment as a matter of law." *Id.*).

With one minor exception in Emine's post-hearing brief (*see* discussion below concerning the "written description" requirement), the evidence and invalidity arguments set forth in the parties' briefs incorporate the construction proposed by ATEN and Staff for the claim term "body" (*i.e.*, "a main, central, or principal part"), as in "a body" (independent claim 1) or "providing a body" (independent claim 21). The parties provide no argument relevant to any

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[38] The Staff does not agree with respondents' arguments to the effect that claims 13 and 21 are anticipated because it does not believe that the "integrated" or "integrating" limitations are found in a single piece of prior art. The Staff does, however, find claims 13 and 21 to be obvious in view of a combination of prior art. *See* Staff Br. at 40, 42. As discussed, *infra*, in the section on obviousness, this Tribunal would reach the same conclusion if the Staff's claim construction (including the ATEN/Staff proposal for the term "body") were adopted.

more limited construction that might be given to that term. *See* ATEN Br. at 38-49 & Reply Br. at 18-28; Belkin Br. at 33-57 & Reply Br. at 19-29;[39] Emine Br. at 27-48[40] & Reply Br. at 13-23;[41] Staff Br. at 35-50 & Reply Br. at 15-17.

The parties' briefs reflect the record evidence on the validity question. Respondents' expert witness, Dr. Min, recognized that ATEN and the Staff share the same proposal for "body," and also that the term "body" should have the same meaning in every claim. *See, e.g.*, Min Tr. 1108. Dr. Min provided evidence concerning alleged invalidity of the asserted claims of the '112 patent based on the claim construction proposed by ATEN and the Staff, as he stated at the commencement of his testimony on the subject:

> Q. Dr. Min, have you been requested to consider the validity of the asserted claims of the '112 patent?
>
> A. Yes, I have.
>
> Q. Can you explain, briefly, to Judge Charneski what you did in that regard?
>
> A. I read, of course, the patents and specification and what I

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[39] As summarized by Belkin, "[t]his inventor claimed to have invented a body that would replace boxes. He removed connectors and fixedly attached cables that used to be detachable. *Complainants would have the Administrative Law Judge call a box a body* and find that detachable cables are fixedly attached cables. Carefully chosen dictionaries may support such a broad reading. The specification, however, does not. *What Complainants now must claim was invented here has been practiced long before 2002.*" Belkin Reply Br. at 29 (emphasis added).

[40] "Respondent's [sic] expert, Dr. Min, thus provided a detailed description of how, under Complainants' claim construction, each and every asserted limitation of the '112 Patent is found within the four corners of several distinct prior art references, including Complainants' own products . . . ." Emine Br. at 27-28.

[41] "Because Complainants' claim construction is excessively broad . . . each and every asserted claim limitation existed in real-world prior art references before the date of invention." Emine Rely Br. at 15 n.12.

> think is the patent said, and then I also received interpretation given by the Complainant at ATEN and contrasted that with my own understanding of what the patent meant, and I've done some prior art search myself, just to see what the, what was out there before this date.
>
> * * * *
>
> Q. Dr. Min, whose claim construction did you use in your validity analysis?
>
> A. I used ATEN's.

Min Tr. 1137-1138. Indeed, Dr. Min proceeded to testify concerning the prior art solely in terms of the claim construction proposed by ATEN and the Staff for the term "body, " *i.e.,* the dictionary definition of "a main, central, or principal part." *See, e.g.*, Min Tr. 1148, 1156.[42]

As detailed above (Section III, "Claim Construction"), the term "body" is not properly construed according to the proposed construction of ATEN and the Staff. Rather, the claim limitations containing the word "body" limit the invention to a greater extent.[43] Inasmuch as the parties' briefs and the evidence of record address the prior art only in terms of the broader and erroneous interpretation of the invention proposed by ATEN and the Staff, there is not clear and convincing evidence that any of the prior art cited against the '112 patent contains the claim limitation "a body" (claim 1) or "providing a body" (claim 21). In fact, there is no evidence of

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[42] "Respondents' infringement case was presented primarily by an analysis under ATEN's proposed claim construction, but Dr. Min testified that he had also analyzed the prior art under the Staff's proposed claim construction and that the difference in claim construction did not change his invalidity opinions or conclusions in any way." Staff Br. at 38 n.12 (citing Min Tr. 1140).

[43] In contrast to the proposed construction ATEN and the Staff, the proper construction of "a body" or "providing a body" requires a "body" to protect the internal circuit board and circuits thereon, and further excludes structures identified in the '112 patent specification as belonging to the prior art rather than the claimed invention.

record at all relating to a "body" as properly construed, and the matter was not addressed by the parties in their post-hearing briefs.

Consequently, it cannot be found that any of the cited prior art, either alone or in combination, contains or discloses all elements of any asserted claim of the '112 patent. Thus, for example, anticipation (which requires a finding of all claim limitation of a single piece of prior art) cannot be found.

However, if the claim term "a body" or "providing a body" were construed as broadly as proposed by ATEN and the Staff, the asserted claims of the '112 patent would be invalid. ATEN may have realized during the hearing and in its briefing that its broad proposed construction of the term "body" would lead to a finding of patent invalidity. ATEN has at times attempted to modify its position of the meaning of "body" by focusing on the attachment of cables to the alleged "body," rather than its broad dictionary definition of the word. ATEN also attempted to distance itself from the Staff in the validity portion of its briefs, even though the Staff proposed the same dictionary definition *verbatim* for the term "body." *See, e.g.*, ATEN Reply Br. at 18 ("Staff's challenge to the patent's validity arises from its *incorrect and overly inclusive construction of the term 'body.'*" (Emphasis added)).

This inconsistency in ATEN's position was not lost on the other parties. For example, Emine states:

> In trying to harmonize his contradictory testimony, Dr. Barker instructed the court to ignore all other structural elements encompassed within the body as a whole when doing its analysis and instead require attachment [of a cable] to only a specific part of the body (i.e., the body wall). However, this position cannot be reconciled with the Complainants' expansive, dictionary-based construction of "body" which means a "main, central or principal

> part." Dr. Barker's attempt to harmonize his contrasting testimony runs afoul of the legal principle that claims must be construed consistently for both infringement and invalidity. *See Kim v. ConAgra Foods, Inc.*, 465 F.3d 1312, 1324 (Fed. Cir. 2004).

Emine Reply Br. at 16-17 (footnote omitted).

In contrast, the Staff's briefs consistently apply ATEN's and the Staff's identical proposed construction of the term "body" to both the infringement and invalidity questions. In view of that broad interpretation of the term "body" (which this Tribunal has rejected) and the Staff's interpretations of the other disputed claim limitations (which have been adopted), the Staff's briefs demonstrate that, but for the proper construction of the term "body," the asserted claims of the '112 patent would be invalid. *See* Staff Br. at 35-50 & Reply Br. at 15-17.

With respect to anticipation, the Staff argues that claims 1, 12 and 14-20 are invalid due to anticipation in view of several pieces of prior art. The Staff provides detailed analysis with respect to the following: Startech.com ("Startech") SV211K Switch Kit (CPX-4); Avocent OutLook ES Series User Guide (RX-535); ATEN Master View Pro KVM Switch model CS-1016 (RPX-8) and ATEN Master View KVM Switch model CS-228 (CPX-1) used with corresponding cable model 2L-1701P (RPX-9); and associated user manuals (RX-60; RX-42; RX-59). *See, e.g.*, Staff Br. at 37-38.

There is no dispute that the ATEN devices or publications (relied upon by the Staff and discussed herein) are prior art properly cited against the asserted claims of the '112 patent because they were on sale in the United States or described in a written publication more than one year prior to July 8, 2002, filing date (CX-7/RX-1) of the '112 patent, *i.e.,* before the undisputed critical date of July 8, 2001. The prior art status of these devices and references is

also supported by the record. *See* Staff Br. at 37; ATEN Br. at 43.

Relying on the deposition testimony of a Startech representative, ATEN belatedly argues that it has not been demonstrated that the Startech SV211K device purchased and offered into evidence in 2007, is identical to any device that might have been on sale in 2001. *See* ATEN Br. at 43. Yet, while the Startech testimony relied upon by ATEN does appear to raise the possibility that some modifications were made to Startech devices over the years, it in no way forecloses the possibility that the devices were on sale in 2001, and it also indicates that the design has remained the same in all respects material to an invalidity analysis of the '112 patent. *See* ATEN Br. at 43; Belkin Reply Br. at 21 (quoting, *inter alia*, Teeple Dep. (JX-32) Tr. 72).

Moreover, ATEN's expert confirmed during his own presentation on direct examination at the hearing that the Startech product identified as CPX-4 (upon which this invalidity analysis is based) is "a good representative of the prior art." *See* Barker Tr. 1388; *see also* Min Tr. 1142 (concerning ATEN demonstrative exhibits). Thus, conclusions reached with respect to the products represented by CPX-4 (a Startech product purchased in 2007) do in fact provide a reliable prior art analysis.

ATEN presents a scant argument concerning the Avocent art to the effect that spread sheets purporting to record sales of the products do not match. *See* ATEN Br. at 43-44. ATEN's belated argument is unclear, and does not raise an effective challenge to the clear and convincing evidence that the Avocent OutLook ES Series User Guide (RX-535) constitutes prior art to the asserted claims of the '112 patent. In addition, the Avocent documents confirm at least one sale of a prior art device before the critical date. *See* RX-78C; RX-84C; RX-138C (Belkin Abuyounes Dep. Designations).

While ATEN argues that the prior art discussed herein "is essentially the same as what the Examiner considered," it is undisputed that these precise pieces of prior art were not before the Patent and Trademark Office ("PTO") examiner during prosecution of the '112 patent. *Compare* ATEN Br. at 44, *with* Staff Brief at 37.

The evidence of record, as analyzed by respondents' expert during the hearing, clearly and convincingly shows that if the "body" were limited merely to "a main, central, or principal part" of the switch, then each of the ATEN, Startech and Avocent prior art devices or references enumerated above contained all limitations of independent claim 1 and its dependent claim 12 (wherein a plurality of cables are fixedly attached to the body through a molded attachment element).

In particular, the prior art disclosed: a KVM switch with a main part (a "body"); a switching circuit contained therein; a set of receptacles (connector ports) on a wall of the body to receive the peripheral plugs that are electrically connected to the circuit board; and at least two cables (plurality of cables) that attach to the connector ports on the wall of the switch body by molded thumbscrew attachments (molded attachment elements) so as not to be readily movable (fixedly attached) and to extend from the body.

The evidence also shows that each cable has attached at its computer end a plurality of cable-connected connectors (connector plugs) for insertion into mating receptacles (connector ports) for the peripherals on the computer; the provided or compatible cables sold for use with the switches have matching sets of cable-connected connectors (connectors plugs) on each cable for insertion into standard peripheral ports on the computers; and the switching circuit functions so as to switch the electrical connection with the set of peripheral receptacles on the switch wall

(connector ports) among each of the plurality of cables. *See* Min Tr. 1147-1158 (StarTech SV211K), 1190-1197 (ATEN CS-228 and ATEN CS-1016), 1206 (Avocent Outlook).

In addition, the prior art at issue contains all the claim elements of dependent claims 14 though 20. In particular, the evidence shows that the set of connector ports on the wall of each prior art switch contains ports to connect computer peripherals (claim 14), including a keyboard port (claim 15), a mouse port (claim 16), and a video port (claim 17). Each cable or set of cables couples the switching circuit to a computer (claim 18). Each of the plurality of cables or sets of cables has a keyboard, video and mouse cable with respective plugs (claim 19). Further, there is a second cable or set of cables in the plurality that couple the switching circuit to a second computer (claim 20). *See* Min Tr. 1140 (Startech), 1153-1155, 1193-94 (ATEN CS228), 1197 (ATEN CS-1016), 1206 (Avocent Outlook); *see also* Min Tr. 1365-1367 (each of the prior art products anticipates all the asserted claims of the '112 patent under the Staff's claim construction except for claims 13 and 21).

ATEN's attempt to avoid a finding of invalidity centers around an argument that is inconsistent with the claim language of the patent. Specifically, ATEN and its expert argued that the alleged invention of the '112 patent is found in the secure attachment of cables to the "body" of the KVM switch rather than to the circuit board. *See, e.g.,* ATEN Br. at 40. ATEN and its expert rely on a "test" to determine whether or not the cables can be securely attached to the "body" of the KVM switch when the circuit board has been removed. While such a test may show whether the cables might be attached securely to the body of the KVM switch in the absence of the circuit board, the "test" does not rely on devices as they were assembled in the prior art for actual use.

Moreover, although ATEN's "test" may have indicated that the cables were attached to the circuit board in the prior art, that should not be unexpected inasmuch as there must be a some sort of connection between cables and circuit board in order for KVM switches to work. ATEN, however, has not shown any place in the '112 patent which requires that cables secure only to the body of the switch, and that they cannot also be connected to the circuit board in a KVM switch covered by the patent. ATEN has failed to link its so-called "test" to the asserted claims of the '112 patent.

In summary, there is clear and convincing evidence of record that if the proposed claim construction of ATEN or the Staff were adopted, at least claims 1, 12 and 14-20 would be invalid as anticipated pursuant to 35 U.S.C. § 102.

B. Obviousness

Respondents argue that the asserted claims of the '112 patent are invalid as obvious under the claim constructions proposed by ATEN and, or, the Staff. The Staff argues that claims 13 and 21 are invalid as obvious under such claim constructions. ATEN opposes a finding of obviousness.

Obviousness is grounded in 35 U.S.C. § 103, which provides, *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 negatived by the manner in which the invention was made.

35 U.S.C. § 103(a).

An allegation of obviousness is evaluated under the so-called *Graham* factors: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 13-17 (1966).

"One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." *KSR Int'l Co. v. Teleflex Inc.*, No. 04-1350, ___ U.S. __ , 127, S.Ct. 1727, 1742 (2007). "[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combing the elements in the manner claimed." *Id.* Specific teachings, suggestions or motivations to combine prior art may provide helpful insights into the state of the art at the time of alleged invention. *Id.* at 1741.

Nevertheless, "an 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." *Id.* "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* at 1742. A "person of ordinary skill is also a person of ordinary creativity . . . ." *Id.*

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). As discussed above in connection with alleged anticipation, there is no evidence that the

claim limitation of a "body," as properly construed, is found anywhere in the cited prior art. Consequently, based on the parties' arguments and the evidence of record, a finding of patent claim invalidity due to obviousness cannot be entered.

However, if a broader definition of body were to be applied, especially that proposed by ATEN and the Staff, at least claims 13 and 21 of the '112 would be invalid due to obviousness.[44] If ATEN's or the Staff's claim construction were adopted, the only asserted claims of the '112 patent that may not be anticipated by the prior art are: claim 13 (which depends from claim 1, and contains the "integrated" limitation), and claim 21 (an independent claim method that contains the corresponding "integrating" limitation).

Nonetheless, there is clear and convincing evidence that a person of ordinary skill in the art could have reasonably combined the disclosures of the anticipating prior art with the Yamada reference cited by respondents and Staff (RX-522) to achieve the expected result of the alleged invention of the '112 patent, and specifically to satisfy the additional limitations of claims 13 and 21 as those limitations are construed herein (and as proposed by the Staff). *See KSR*, 127 S. Ct. at 739 ("[T]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.").

The Yamada reference (RX-90, RX-522 (certified translation)) is a published Japanese

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[44] The claims found to be entirely anticipated under ATEN's or the Staff's proposed claim construction would certainly be automatically obvious under the same construction. *See In re Baxter Travenol Labs.*, 952 F.2d 388, 391 (Fed. Cir. 1991)("[S]ince anticipation is the ultimate of obviousness . . . the subject matter of these claims is necessarily obvious and we need not consider them further.").

patent application with a release date of February 25, 1997.[45] It disclosed an automatic switch for a personal computer peripheral. Although the Yamada device is not a KVM switch (for a keyboard, video or mouse), the Yamada design would allow a user to switch a printer connection between two computers.

A question is raised as to whether one or ordinary skill would turn to art such as the Yamada printer switch. Contrary to ATEN's arguments, the relevant art covers computer peripherals such as the Yamada art. A person of ordinary skill is presumed to have knowledge of arts reasonably pertinent to the particular problem with which the inventor is concerned. *See In re Paulsen*, 30 F.3d 1475, 1481 (Fed. Cir. 1994). In this case, no party proposed a definition of a person of ordinary skill that would restrict that person's field of knowledge to KVM switches.[46] In fact, during the prosecution of the '112 patent, the examiner also considered prior art outside KVM switches. *See* JX-2 (file history); Barker Tr. 1458-1459.

Moreover, as discussed above in the section on claim construction (Section III), one of ordinary skill in the art relevant to the '112 patent would have been educated in communications systems and electronics, and would have had post-graduate industrial experience in the communication equipment industry. Thus, a person of ordinary skill in the art would have been aware of computer peripherals such as printers and printer switches, and would have understood the applicability of such art to problems associated with peripherals such as KVM switches.

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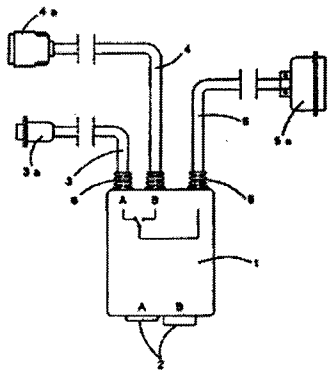
[45] This reference was not before the examiner during prosecution of the '112 patent. *See* JX-2 (file history); Min Tr. 1222.

[46] Even ATEN's expert could not deny that his own proposed person of ordinary skill in the art approaching the problem addressed in the '112 patent would have had knowledge of, and experience with, computer printer switches in addition to KVM switches, and would have had the skill and the knowledge to combine their teachings. *See* Barker Tr. 1458-1460.

Objections to the Yamada art are merely academic at best. Not only would the computer application be used in tandem with one or more printers, but the evidence shows that both Emine and ATEN have produced printer switches (the subject of the Yamada reference) as part of their business, in addition to KVM switches. *See* Min Tr. 1220-1221; K. Chen Tr. 99-100 (In its beginnings, ATEN produced an automatic printer switch designed by Kevin Chen, the inventor of the '112 patent); Hou Tr. 930-931, 950 (KVM and printer switches made by Emine). Respondents' expert testified that one of ordinary skill would appreciate the fact that certain features of printer switches could be used for KVM switches. Min Tr. 1369-1370 ("And looking at the one, well, we can easily see that attaching cable in here, yes, I will do it in KVM as well, so that's just a natural blend of expertise.").

Turning to the disclosure of the Yamada patent application, it is evident that the Yamada switch has cables attached to the main part of the switch (a "body" according to ATEN and the Staff) by a molded strain relief element (constituting a "molded attachment element") so as not to be readily movable (fixedly attached), as well as cables integrated into the main part of the switch (body) so as to form a unified whole (integrated) that cannot be separated from the body without disassembly of the whole. The Yamada switch (as illustrated in its Fig. 1) is depicted below.



According to the record evidence, the only limitation that may be absent from the anticipating prior art references, under the Staff's construction, is the integration limitation of claims 13 and 21. However, it is clearly and convincingly disclosed by Yamada. *See* Min Tr. 1222, 1226 (Yamada discloses integrating the cables using a molded attachment element to eliminate connectors on the surface of the switch); 1368 (conclusion);[47] *see also,* Barker Tr. 1460 (Dr. Barker agreed on cross-examination that a combination of Yamada with any one of the other prior art devices discloses all limitations of each asserted claims in the '112 patent.). Therefore, when Yamada is combined with any of the anticipatory prior art references, all claim limitations of the remaining claims are disclosed.

As indicated above, one of the *Graham* factors which 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 to a determination of obviousness."). However, secondary

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[47] Specifically with respect to the Staff's proposed construction of the claims, respondents' expert testified:

> Q. And what is your opinion as to why the Yamada reference, prior art switches, renders those claims obvious under the Staff's construction?
>
> A. Yes, that additional, the element in your interpretation, in addition to what ATEN's interpretation is, you cannot detach it without disassembling. The printer switch, as shown in Yamada, the way the cables are attached to, through the molded attachment, and that would make that limitation integrating into the body obvious, combining that with other of the prior art references, you know, cited earlier on.

Min Tr. 1368.

considerations, such as commercial success, will not always dislodge a determination of obviousness based an analysis of the prior art. *See KSR Int'l*, 127 S.Ct. at 1745 (commercial success did not alter conclusion of obviousness in the trial court or the Supreme Court).

In this case, secondary considerations do not overcome the obviousness determination. While ATEN offered evidence regarding commercial success and copying of their cable KVM switch in general, this evidence did not focus on the integrated cables. *See, e.g.*, Yang Tr. 254-255 (regarding cable KVM allowing ATEN to break into market with large national retailers); Barker Tr. 1455 (regarding press releases and product reviews of ATEN products).

Additionally, this evidence was rebutted by a showing that the cable KVM products were not necessarily successful, that Emine did not copy ATEN's design, and that their appearance and any success in the market may have been driven by market changes, rather than by any alleged copying of an ATEN product or design. *See* Hou Tr. 952-953, 972-973 (Emine's cable KVM line not successful); Hou Tr. 938 (Emine did not have an ATEN sample nor copy ATEN's design when designing its first cable KVM); Lin Tr. 996-997 (Emine did not copy ATEN design for cable KVM "because it was a very simple project. All we have to do is to remove the connector port and to connect a cable onto that main board, it was something very simple."); Barker Tr. 1464 (in 2000-2002, the market started to recognize that perhaps there was a consumer market for KVM switches).

Accordingly, the evidence of record shows clearly and convincingly that if a claim construction were adopted such as that of the Staff, claims 13 and 21 of the '112 patent would be invalid as obvious.

C. Written Description

The first paragraph of Section 112 of the Patent Act provides:

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

35 U.S.C. § 112, ¶ 1.

Emine devotes less than two pages of its main post-hearing brief to an argument that the asserted claims 1 and 12-20 of the '112 patent may be invalid due to a failure to comply with the written description requirement of section 112. Specifically, it is argued that this Tribunal should declare those claims invalid "to the extent Complainants continue to argue that the '112 Patent can be applied to products with connector ports located other than on the body of a KVM switch." Emine Br. at 47-48. ATEN opposes this argument. ATEN Reply Br. at 4 n.4.

This Tribunal has not adopted ATEN's proposed construction of "connector ports." Further, it was Emine's argument that ATEN adopted an overly broad definition of "connector ports" to read on Emine's Group 2 products with cables ending in connector plugs rather than having connector ports on the body. However, infringement of those devices has not been found. Thus, Emine's argument concerning the "written description" requirement is moot. In any event, Emine's argument concerning the "written description" requirement is not developed in its briefs, and it is unclear whether one of ordinary skill would encounter a deficiency in reading the '112 patent if ATEN's proposed claim construction had been adopted for this claim limitation.

VI. UNENFORCEABILITY

Emine argues that the '112 patent is unenforceable due to inequitable conduct committed by the patentee (or his representative) during patent prosecution before the PTO. ATEN and the Staff oppose a finding of unenforceability. As explained below, Emine has failed to establish the alleged inequitable conduct by the required clear and convincing evidence standard.

A patent is unenforceable on grounds of inequitable conduct if the patentee made affirmative misrepresentations of material fact to the PTO, failed to disclose material information, or submitted false material information, coupled with an intent to deceive. *GFI, Inc. v. Franklin Corp.,* 265 F.3d 1268, 1273 (Fed. Cir. 2001); *Purdue Pharma L.P. v. Boehringer Ingelheim GmbH,* 237 F.3d 1359, 1366 (Fed. Cir. 2001); *Labounty Mfg., Inc. v. United States Int'l Trade Comm'n,* 958 F.2d 1066, 1070 (Fed. Cir. 1992). Both materiality and intent must be proven by clear and convincing evidence. *Kingsdown Med. Consultants, Ltd. v. Hollister, Inc.,* 863 F.2d 867, 872 (Fed. Cir. 1988) (*en banc*); *see also, Intirtool, Ltd. v. Texar Corp.,* 369 F.3d 1289, 1296 (Fed. Cir. 2004). If materiality and intent are shown, then one must determine whether the equities warrant a conclusion that the patentee has engaged in inequitable conduct. *Hoffman-La Roche, Inc v. Promega Corp.,* 323 F.3d 1354, 1359 (Fed. Cir. 2003).

In this case, Emine argues that ATEN failed to disclose its own prior art switches that would have been material to the prosecution of the '112 patent, and also that ATEN misled the examiner by fabricating and submitting to the PTO a stylized Figure 1 with statements about the prior art that did not accurately reflect the state of the art at that time.

In view of the invalidity discussion above (*see* Section V), there is clear and convincing evidence that ATEN's own prior art switches (particularly the ATEN Master View Pro KVM

Switch model CS-1016 and the ATEN Master View KVM Switch model CS-228) were material to the prosecution of the '112 patent because they contain many elements of the asserted claims.

Also, as discussed above, if a claim construction were adopted that is broader than that adopted in this Initial Determination (for example, if the Staff's claim construction were adopted), the ATEN prior art would clearly anticipate many of the '112 patent claims, and in combination with other prior art would clearly render others at least obvious. In such a case, the ATEN prior art would be highly material.

Thus, Emine clearly has established materiality. It has failed, however, to establish the requisite intent to deceive. In that regard, Emine attempts to build its case of intent on the basis of inference, and little else. An examination of Emine's main and reply briefs shows that it relies upon an inference of intent on the part of the inventor, or ATEN, or patent counsel, or all of these parties. However, there is absolutely no showing by respondent that such an inference is warranted.

In addition, Emine did not develop a record sufficient to find specific evidence of the deceptive intent that it now seeks. While the patent and its prosecution history are in evidence, there is little information from which the reasons for specific actions and statements could be discerned. The only witness whose testimony directly addressed the question of inequitable conduct is that of inventor Chen (*see* Chen Tr. 166-170). His testimony provides little insight into the question of intent other than the fact that he was aware of his duty to provide known material information to the PTO. Thus, Emine's charge of inequitable conduct must fail.

Consequently, it is not found by clear and convincing evidence that the '112 patent is unenforceable.

VII. 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 it must be shown by ATEN that it satisfies both the technical and economic prongs of the domestic industry requirement with respect to the '112 patent.

A. Technical Analysis

For the purposes of ATEN's argument concerning the technical prong of the domestic industry required, ATEN placed its products into five groups. ATEN characterizes some of the products as 2-port cable KVMs, and others as 4-port cable-KVM. Group 1 is represented by CPX-52, CPX-46, CPX-45, CPX-19 and CPX-53. Group 2 is represented by CPX -17, CPX-15, CPX-38, CPX -18 and CPX-601. Group 3 is represented by CPX -11 and CPX-51. Group 4 is

represented by CPX-34. Group 5 is represented by CPX-22. ATEN argues that all of the representative devices practice all the asserted claims of the '112 patent. *See* ATEN Br. at 31. All other parties oppose a finding that the technical prong of the domestic industry requirement is satisfied.

The testimony of ATEN's expert, as reflected in ATEN's brief, is based only on its proposed claim construction, which includes its proposed construction for the term "body." Limitations based on the term "body" are contained in all claims of the '112 patent (both asserted and non-asserted) because "body" limitations are contained in the independent claims. As detailed in Section III (Claim Construction) and discussed throughout this Initial Determination (including Section IV in which no infringement was found by accused products), ATEN's proposed construction for the term "body" is based on an overly broad, dictionary definition that is inconsistent with the patent claim and the specification, including the Background and Summary portions. Thus, it has been rejected.[48] ATEN does not provide any evidence whatsoever with respect to any alternative to its proposed claim construction. Consequently, having fallen on the sword of its own failed claim construction, there is simply no evidence that ATEN's products practice any claim of the '112 patent.

Accordingly, it has not been established that the technical prong of the domestic industry requirement is satisfied.

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[48] As discussed in Section V (Validity), ATEN has also attempted to modify its interpretation of "body" in various portions of its testimony and briefing, such as through the use of a so-called "test" for patent infringement involving the attachment of cables. That "test" has been rejected as inconsistent with the claims, and is unpersuasive.

B. Economic Analysis

A domestic industry 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.

Inasmuch as complainants admit that they do not manufacture KVM switches in the United States, it must be shown that pursuant to subsection 337(a)(3)(C), set forth above, there is a substantial domestic investment in the exploitation of the '112 patent.[49]

Complainants' own evidence shows that most of activities and expenditures related to the patent occur overseas in Taiwan or mainland China. *See, e.g.*, Yang Tr. 258-259. Nevertheless, the evidence provided at the hearing demonstrates a substantial investment in the United States, especially through complainant ATEN Technology, Inc. of Irvine, California.

ATEN Technology, Inc. had operating expenses in 2006 of [ ], including rent, payroll, purchasing, advertising, product development and other expenses. Yang Tr. 255;

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[49] Neither complainants nor the Staff alleged that complainants license the '112 patent in the United States.

CX-749C. The record evidence shows that the equivalent of [ ] full-time employees are based in the United States, and devote their time to products that complainants and the Staff allege to practice the '112 patent. The total payroll for these employees was [ ] in 2006, and is expected to be approximately the same in 2007. The employees engage in customer training and support, the drafting of manuals, a limited amount of testing, minor repairs to returned products, and a small amount of design work.[50] *See* Yang Tr. 313-314, 341-348, 356-361, 374-386; *see also,* CDX-212C-1 (guide to payroll expenditure data). The employees are also involved to some extent in the development of two new products, including market and technology feasibility analysis, and industrial design. *See* Yang Tr. 262-263. The domestic employees also share office and technical equipment, and office space with other employees.

Accordingly, if it had been established that complainants' products practice the '112 patent, the economic prong of the domestic industry requirement would be satisfied.

VIII. CONCLUSIONS OF LAW

1. The Commission has personal jurisdiction over the parties, and subject-matter jurisdiction over the accused products.

2. The respondents have imported and, or, sold for importation the accused products.

3. It has not been established by a preponderance of the evidence that the accused products infringe any asserted claim of the '112 patent.

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[50] Many of these activities have long been recognized as relevant to the domestic industry question. *See Certain Cube Puzzles,* Inv. No. 337-TA-112, USITC Pub. 1334, 219 U.S.P.Q. 322 (Int'l Trade Comm'n 1983) (domestic industry based on quality control, repair and packaging of imported cube puzzles); *Certain Plastic Fasteners and Processes for the Manufacture Thereof,* Inv. No. 337-TA-248, Initial Determination (June 1987), aff'd, Comm'n Op. at 49-51 (1987).

4. It has not been established by clear and convincing evidence that any asserted claim of the '112 patent is invalid due to anticipation.

5. It has not been established by clear and convincing evidence that any asserted claim of the '112 patent is invalid due to obviousness.

6. It has not been established by clear and convincing evidence that claims 1 and 12-20 of the '112 patent are invalid due to a failure to comply with the written description requirement.

7. It has not been established by clear and convincing evidence that the '112 patent is unenforceable due to inequitable conduct.

8. It has not been established that the domestic industry requirement of section 337 has been satisfied.

IX. INITIAL DETERMINATION AND ORDER

Based on the foregoing opinion, findings of fact, conclusions of law, the evidence, and the record as a whole, and having considered all pleadings and arguments, including the proposed findings of fact and conclusions of law, it is the Administrative Law Judge's INITIAL DETERMINATION ("ID") 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 switches or products containing same by reason of infringement of one or more of claims 1 and 12-21 of United States Patent No. 7,035,112.

The Administrative Law Judge hereby CERTIFIES to the Commission this Initial Determination, together with the record of the hearing in this investigation consisting of the following:

1. The transcript of the hearing, with appropriate corrections as may hereafter be ordered by the Administrative Law Judge; and further,

2. The exhibits accepted into evidence in this investigation as listed in the attached exhibit lists.

In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the Administrative Law Judge 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 by the Administrative Law Judge in this investigation, and upon the Commission investigative attorney.

To expedite service of the public version, each party is hereby ORDERED to file with the Commission Secretary by no later than November 14, 2007, a copy of this ID with brackets that show any portion considered by the party (or its suppliers of information) to be confidential, accompanied by a list indicating each page on which a bracket is found. At least one copy of such a filing shall be served upon the Administrative Law Judge, and the brackets shall be marked in red. If a party (and its suppliers of information) considers nothing in the ID to be confidential, and thus makes no request that any portion be redacted from the public version of this ID, then a statement to that effect shall be filed in lieu of a document with brackets.

Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the ID or certain issues herein.

Carl C. Charneski
Administrative Law Judge

Issued: November 7, 2007

CERTAIN SWITCHES AND PRODUCTS CONTAINING SAME

Inv. No. 337-TA-589

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **INITIAL DETERMINATION** was served by hand upon Commission Investigative Attorney Heidi E. Strain, Esq., and upon the following parties via first class mail and air mail where necessary on November 23, 2007.

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