PUBLIC VERSION

In the Matter of **CERTAIN STATIC RANDOM ACCESS MEMORIES AND PRODUCTS CONTAINING SAME**	**Investigation No. 337-TA-792**

COMMISSION OPINION

I. INTRODUCTION

On October 25, 2012, the presiding administrative law judge ("ALJ") (Judge Bullock) issued his original final initial determination ("ID") in this investigation. The ALJ found no violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to the accused products of respondents GSI Technology, Inc., Cisco Systems, Inc., and California Avnet, Inc. ("Respondents") in connection with United States Patent Nos. 6,534,805 ("the '805 patent"); 6,651,134 ("the '134 patent"); 6,262,937 ("the '937 patent"); and 7,142,477 ("the '477 patent"). On December 21, 2012, the Commission determined to review the ID in its entirety and remanded the investigation to the ALJ to make findings on invalidity and unenforceability, issues on which he did not rule. On February 25, 2012, the ALJ issued his Remand ID ("RID"), finding that the asserted patents are enforceable and not invalid. On April 26, 2013, the Commission determined to review the RID in part. Specifically, the Commission determined to review the ALJ's invalidity determinations.

Upon review of the ID and RID, the Commission affirms the ALJ's finding of no violation of section 337. Specifically, with respect to the '805 patent, the Commission affirms the following findings: (1) complainant Cypress Semiconductor Corporation ("Cypress") failed to prove that the accused products infringe the asserted claims; (2) Cypress failed to establish the

technical prong of the domestic industry requirement; and (3) Respondents failed to establish by clear and convincing evidence that neither the Osada reference nor the Ishida '041 patent anticipates the asserted claims. The Commission reverses the ALJ's finding that the Ishida IEDM reference does not anticipate the asserted claims of the '805 patent. Regarding the '134, '937, and '477 patents, the Commission affirms the following findings: (1) Cypress failed to prove that the accused products infringe the asserted claims; (2) Cypress failed to establish the technical prong of the domestic industry requirement; and (3) Respondents failed to establish by clear and convincing evidence that the cited prior art references anticipate the asserted claims. The Commission supplements and modifies the ID and RID as discussed below.

II. BACKGROUND

A. Procedural History

The Commission instituted this investigation on July 28, 2011, based on a complaint filed by Cypress. 76 *Fed. Reg.* 45295 (July 28, 2011). The complaint alleged violations of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain static random access memories and products containing the same by reason of infringement of various claims of the '805, '134, '937 and '477 patents. *Id.* The notice of investigation named the following respondents: GSI Technology, Inc. of Sunnyvale, California ("GSI"); Alcatel-Lucent of Paris, France ("Alcatel-Lucent"); Alcatel-Lucent USA, Inc. of Murray Hill, New Jersey ("Alcatel-Lucent USA"); Telefonaktiebolaget LM Ericsson of Stockholm, Sweden ("Ericsson LM"); Ericsson, Inc. of Plano, Texas ("Ericsson"); Motorola Solutions, Inc. of Schaumburg, Illinois ("Motorola"); Motorola Mobility, Inc. of Libertyville, Illinois ("MMI");

Arrow Electronics, Inc. of Melville, New York ("Arrow"); Nu Horizons Electronics Corp. of Melville, New York ("Nu Horizons"); Cisco Systems, Inc. of San Jose, California ("Cisco"); Hewlett Packard Company/Tipping Point of Palo Alto, California ("HP"); Avnet, Inc. of Phoenix, Arizona ("Avnet"); Nokia Siemens Networks US, LLC of Irving, Texas ("Nokia US"); Nokia Siemens Networks B.V. of Zoetermeer, Netherlands ("Nokia"); and Tellabs of Naperville, Illinois ("Tellabs"). *Id.* The Office of Unfair Import Investigations is not a party to this investigation.

On September 15, 2011, the ALJ issued an ID terminating the investigation as to respondents Arrow and Nu Horizons based upon a consent order stipulation. *See* Order No. 9 (Sept. 15, 2011). The Commission determined not to review. *See* Notice of Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation as to Respondents Arrow Electronics, Inc. and Nu Horizons Corp. Based on Consent Order Stipulation (Oct. 18, 2011).

On January 31, 2012, the ALJ issued IDs terminating the investigation as to respondents Alcatel-Lucent USA, Nokia, and Nokia US based upon settlement agreements. *See* Order Nos. 23 and 25 (Jan. 31, 2012). The Commission determined not to review.[1]

On February 6, 2012, the ALJ issued an ID terminating the investigation as to respondent Alcatel-Lucent based upon withdrawal of allegations pertaining to Alcatel-Lucent from the

[1] *See* Notice of Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation as to Respondent Alcatel-Lucent USA, Inc. on the Basis of a Settlement Agreement (Feb. 17, 2012); Notice of Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation as to Respondents Nokia Siemens Networks B.V. and Nokia Siemens Networks, LLC Based Upon the Execution of a Settlement Agreement (Feb. 17, 2012).

complaint. *See* Order No. 26 (Feb. 6, 2012). The Commission determined not to review. *See* Notice of Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation as to Respondent Alcatel-Lucent Based Upon Withdrawal of Certain Allegations from the Complaint (Feb. 22, 2012).

On February 14, 2012, the ALJ issued IDs granting motions for summary determination of no violation of section 337 as to MMI, HP, Motorola, Tellabs, and Ericsson LM. *See* Order Nos. 34 and 35 (Feb. 14, 2012). The Commission determined not to review.[2]

That same day, the ALJ issued an ID granting Cypress's motion for summary determination that it has satisfied the economic prong requirement for domestic industry under 19 U.S.C. § 1337(a)(3). *See* Order No. 37 (Feb. 14, 2012). The Commission determined not to review. *See* Notice of Commission Determination Not to Review an Initial Determination Granting Complainant's Motion for Summary Determination that It Has Satisfied the Economic Prong for Domestic Industry Under 19 U.S.C. § 1337(a)(2) (Mar. 7, 2012).

The ALJ held an evidentiary hearing from March 12, 2012, through March 14, 2012, and thereafter received post-hearing briefing from the parties. During the hearing, the ALJ granted a motion by Cypress to withdraw its allegations that certain of the accused SRAM products that [ ] infringe claims 1, 2, and 5 of the '805 patent. *See* Hearing Tr. at 142:4-16.

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[2] *See* Notice of Commission Determination Not to Review an Initial Determination Granting a Motion for Summary Determination than Respondent Motorola Mobility, Inc. Has Not Violated Section 337 of the Tariff Act of 1930 (Mar. 7, 2012); Notice of Commission Determination Not to Review an Initial Determination Granting a Motion for Summary Determination that Respondents Hewlett-Packard Company/Tipping Point, Motorola Solutions, Inc., Tellabs, Inc., and Telefonaktiebolaget LM Ericsson Have Not Violated Section 337 of the Tariff Act of 1930 (Mar. 7, 2012).

On March 19, 2012, the ALJ issued an ID terminating the investigation as to respondent Ericsson based upon a settlement agreement. *See* Order No. 46 (Mar. 19, 2012). The Commission determined not to review. *See* Notice of Commission Determination Not to Review an Initial Determination Granting a Joint Motion to Terminate the Investigation as to Respondent Ericsson, Inc. Based Upon the Execution of a Settlement Agreement (Apr. 13, 2012).

On April 5, 2012, the ALJ issued an ID granting an unopposed motion by Cypress to withdraw allegations pertaining to claim 2 of the '937 patent from the investigation. *See* Order No. 48 (Apr. 5, 2012). The Commission determined not to review. *See* Notice of Commission Determination Not to Review an Initial Determination Granting Complainant's Unopposed Motion to Terminate the Investigation as to Claim 2 of U.S. Patent No. 6,262,937 Based Upon Withdrawal of Allegations from the Complaint (Apr. 30, 2012).

On July 12, 2012, the ALJ issued an ID extending the target date for completion of the investigation by approximately three months to February 25, 2013. *See* Order No. 49 (July 12, 2012). The Commission determined not to review. *See* Notice of Commission Determination Not to Review an Initial Determination Extending the Target Date for Completion of the Investigation (Aug. 13, 2012).

On October 25, 2012, the ALJ issued his final ID, finding no violation of section 337 by the remaining respondents: GSI, Avnet, and Cisco ("Respondents"). Specifically, the ALJ found that the Commission has subject matter jurisdiction, *in rem jurisdiction* over the accused products, and *in personam* jurisdiction over the respondents. ID at 8. The ALJ also found that the importation requirement of section 337 (19 U.S.C. § 1337(a)(1)(B)) has been satisfied. *Id.* The ALJ, however, found that the accused products do not infringe the asserted claims of the

involved patents. *See* ID at 16, 24, 39, and 55. The ALJ also found that Cypress failed to establish the existence of a domestic industry that practices the asserted patents under 19 U.S.C. § 1337(a)(2) because of failure to establish the technical prong of the domestic industry requirement. *See* ID at 20, 31, 45, and 58. The ALJ did not consider the validity or enforceability of the asserted patents despite Respondents' arguments in both their pre-hearing and post-hearing briefs that the asserted patents are invalid in light of the prior art, and that the '477 patent is unenforceable for inequitable conduct. *See* ID at 20, 31, 45-46, and 59.

On November 7, 2012, Cypress filed a petition for review of the ID, challenging the ALJ's findings that the accused products do not infringe the asserted claims of the asserted patents. *See* Complainant Cypress Semiconductor Corporation's Petition for Commission Review ("Cypress Pet."). That same day, Respondents filed a contingent petition for review.[3] *See* Respondents' Contingent Petition for Review ("Resp. Pet."). On November 15, 2012, the parties filed responses to the petitions for review. *See* Cypress Semiconductor Corporation's Response to Respondents' Contingent Petition for Review ("Cypress Resp."); Respondents Response to Complainant Cypress Semiconductor Corporation's Petition for Review ("Resp. Resp.").

On December 21, 2012, the Commission determined to review the ID in its entirety and remanded the investigation to the ALJ to make findings on invalidity and unenforceability, issues litigated by the parties but not addressed in the final ID. On February 25, 2012, the ALJ issued his RID, finding that the asserted patents are enforceable and not invalid.

[3] Under the Commission's rules, contingent petitions for review are treated as petitions for review. 19 C.F.R. § 210.42(b)(3).

On March 11, 2013, Respondents filed a petition for review of the RID, challenging the ALJ's findings that the asserted patents are enforceable and not invalid. *See* Respondents' Petition for Review of the Remand Initial Determination on Validity and Unenforceability ("Resp. RID Pet."). On March 19, 2013, Cypress filed a response to the petition for review. *See* Complainant Cypress Semiconductor Corporation's Response to Respondents' Petition for Review of the Remand Initial Determination on Validity and Unenforceability ("Cypress RID Resp.").

On April 26, 2013, the Commission determined to review the RID in part, *i.e.*, with respect to invalidity. *See* 78 *Fed. Reg.* 25767 (May 2, 2013). The Commission declined Respondents' request to take judicial notice of the on-going reexamination proceedings at the United States Patent and Trademark Office regarding the '805 patent and admit filings in that case into evidence in this investigation. *Id.*

B. Patents and Technology at Issue

The technology at issue in this investigation generally relates to static random access memories or "SRAMs." ID at 4. An SRAM memory acts like a switch in that the memory retains its state for as long as the memory has power, unlike a DRAM (dynamic random access memory), which needs to be constantly refreshed to maintain its state. Cypress Pet. at 6.

The '805 patent, entitled "SRAM Cell Design" issued on March 18, 2003. The patent names Bo Jin as the inventor. '805 patent (JX-1). The '805 patent describes an improved SRAM cell design and method of manufacture. '805 patent, col. 1, ll. 7-10. Cypress owns the patent and has asserted independent claim 1 and dependent claims 2 and 4–6 in this investigation.

The '134 patent, entitled "Memory Device with Fixed Length Non Interruptible Burst"

issued on November 18, 2003. '134 patent (JX-2). The patent names Cathal G. Phelan as the inventor. The '134 patent describes "a memory device that transfers a fixed number of words or data with each access." '134 patent, col. 1, ll. 6-8. Cypress owns the patent and has asserted independent claim 1 and dependent claims 2 and 12–15 in this investigation.

The '937 patent, entitled "Synchronous Random Access Memory Having a Read/Write Address Bus and Process for Writing to and Reading from the Same" issued on July 17, 2001. '937 patent (JX-4). The patent names Matthew R. Arcoleo, Cathal G. Phelan, Ashish Pancholy, and Simon J. Lovett as the inventors. The '937 patent describes "a random access memory and the process for writing to and reading from the same." '937 patent, col. 1, ll. 19-22. Cypress owns that patent and has asserted independent claim 1 and dependent claims 6, 12, and 13 in this investigation.

The '477 patent, entitled "Memory Interface System and Method for Reducing Cycle Time of Sequential Read and Write Accesses Using Separate Address and Data Buses," issued on November 28, 2006. '477 patent (JX-3). The patent names Thinh Tran, Joseph Tzou, and Suresh Parameswaran as the inventors. The '477 patent describes a "memory interface that transparently separates the read and write address and data buses to achieve a faster sequential read and write cycle time." '477 patent, col. 1, ll. 10-13. Cypress owns the patent and has asserted independent claim 8 and dependent claim 9 in this investigation.

C. Products at Issue

Cypress has accused certain GSI SRAMs and downstream products of Cisco and Avnet that contain those GSI SRAMs in this investigation. For a complete list of the specific accused products and patent claims asserted against those products, see ID at 6-7.

III. DISCUSSION OF ISSUES UNDER REVIEW

A. The '805 Patent

Cypress has asserted independent claim 1 and dependent claims 2 and 4-6 of the '805 patent in this investigation. Claim 1 recites:

> A memory cell comprising a series of four substantially oblong active regions formed within a semiconductor substrate and arranged side-by-side with long axes substantially parallel, wherein each of the inner active regions of the series comprises a pair of source/drain regions for a respective p-channel transistor, and each of the outer active regions of the series comprises a pair of source/drain regions for a respective n-channel transistor.

'805 patent, col. 13, l. 44 – col. 14, l. 4 (claim 1).

1. Infringement

a. Applicable Law on Infringement

Direct infringement of a patent under 35 U.S.C. § 271(a) consists of making, using, offering to sell, or selling a patented invention without consent of the patent owner or importing a patented invention into the United States without consent of the patent owner. Section 337 prohibits "the importation into the United States, the sale for importation, or the sale within the United States after importation . . . of articles that infringe a valid and enforceable United States patent . . . ." 19 U.S.C. § 1337(a)(1)(B).

A determination of patent infringement encompasses a two-step analysis. *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d 1329, 1336 (Fed. Cir. 2001). First, the scope and meaning of the patent claims asserted are determined, and then the properly construed claims are compared to the allegedly infringing device. *Id.* Each patent claim element or limitation is considered material and essential to an infringement determination. *See London v.*

Carson Pirie Scott & Co., 946 F.2d 1534, 1538 (Fed. Cir. 1991). "Literal infringement of a claim exists when each of the claim limitations reads on, or in other words is found in, the accused device." *Allen Eng. Corp. v. Bartell Indus.*, 299 F.3d 1336, 1345 (Fed. Cir. 2002). To prove direct infringement, the plaintiff must establish by a preponderance of the evidence that one or more claims of the patent read on the accused device either literally or under the doctrine of equivalents. *Scimed*, 261 F.3d at 1336. In a section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *Enercon GmbH v. Int'l Trade Comm'n,* 151 F.3d 1376 (Fed. Cir. 1998).

b. Whether the Accused Products Infringe the Asserted Claims of the '805 Patent

The ALJ found that Cypress failed to prove by a preponderance of the evidence that the accused products infringe the asserted claims of the '805 patent. Specifically, the ALJ stated:

> The undersigned finds Respondents' arguments to be persuasive. Mr. McAlexander's [Cypress's expert] testimony is conclusory in nature. Furthermore, Mr. McAlexander merely refers to various demonstrative exhibits as alleged support for his conclusory statements. Demonstrative exhibits, however, have no intrinsic evidentiary value and are only as reliable as that evidence upon which they rely. Accordingly, the undersigned finds that Cypress has failed to demonstrate that the [ ] infringes claims 1, 2, and 4 by a preponderance of the evidence.

ID at 16. We agree with the ALJ that Cypress failed to demonstrate that the [ ] infringes the asserted claims of the '805 patent for the reasons stated in the ID in addition to the reasons below.

Cypress challenges the ALJ's findings in its petition for review and makes two primary arguments. *See* Cypress Pet. at 9. First, Cypress contends that its expert, Mr. McAlexander

analyzed the designs used to build the accused products, and based on simple visual inspection opined that they meet the claim limitations as construed by the ALJ. *Id.* According to Cypress, its expert's testimony constitutes proper and sufficient evidence. *Id.* Second, Cypress argues that its expert generated demonstrative exhibits to show those shapes to the ALJ, and "because the underlying computer files would be useless to the ALJ, those demonstratives are appropriate evidence." *Id.*

With respect to the first argument, the ALJ did not find or suggest that "simple visual inspection" cannot constitute sufficient evidence. He specifically found that Mr. McAlexander presented conclusory statements. ID at 16. Because Mr. McAlexander failed to adequately explain how his methodology led to his conclusion, the ALJ found his testimony unpersuasive. *Id.* The ALJ's finding and conclusion finds support in the record evidence. Mr. McAlexander testified:

[

]

CX-385.1C at Q.348. That is, Mr. McAlexander merely set forth the claim construction and with scant analysis concluded that the claim terms were met. For example regarding the first prong,

he simply stated that the limitation was met [

]

Id. Thus, we agree with the ALJ that Mr. McAlexander's testimony (above) was conclusory.

Cypress claims that Mr. McAlexander's analysis relied upon the mask layouts of the GDS files produced by GSI. The GDS files, however, are not in evidence, and thus nothing in the record substantiates Mr. McAlexander's testimony. Mr. McAlexander states that he simply looked at the mask layouts in reaching his conclusion and does not cite any evidence of record for support. In light of this, we find that the ALJ did not err in according Mr. McAlexander's testimony little weight.

Cypress makes much of its view that the Federal Circuit has sanctioned the use of visual inspections. *See* Cypress Pet. at 16. However, as noted above, the ALJ did not categorically reject the use of visual inspections. He found that Mr. McAlexander's testimony was conclusory in nature and lacked citation to actual record evidence. ID at 16. Moreover, the cases upon which Cypress relies for support are unhelpful. Cypress claims that Mr. McAlexander's conduct is consistent with Federal Circuit precedent because when comparing shapes and structures of an accused product to the claims of a patent, visual inspection suffices. Cypress Pet. at 16 (citing *K-TEC, Inc. v. Vita-Mix corp.*, 696 F.3d 1364 (Fed. Cir. 2012); *Canon Computer Sys., Inc v. Nu-Kote Int'l, Inc.*, 134 F.3d 1085 (Fed. Cir. 1998)).

In *K-TEC*, the Federal Circuit noted that a visual inspection analysis can be appropriate when "relatively simple technology" is at issue. *K-TEC*, 696 F.3d at 1374. The technology at issue in *K-TEC* involved a blending jar, technology readily susceptible to visual inspection. *Id.* The technology at issue here, on the other hand, involves complex integrated circuits, which as

Cypress acknowledges, "involves microscopic patterns inside memory chips not visible to the naked eye." *Id.*; Cypress Pet. at 1. Similarly, *Canon* is unhelpful. As Respondents observe, plaintiff's expert in *Canon* not only performed a visual inspection of the accused device, he submitted claim charts and an affidavit explaining his findings. *Canon*, 134 F.3d at 1089. In contrast, Mr. McAlexander, like the defendant's expert in *Canon*, provided a "conclusory statement," which proved insufficient. *Id.* Thus, rather than support Cypress, *Canon* provides support for the ALJ' finding.

With respect to the second argument, *i.e.* the ALJ discrediting Cypress's sole reliance on demonstrative exhibits, we find no error in the ALJ's finding. Importantly, during the pre-hearing conference, the ALJ provided guidance to the parties on the use of demonstrative evidence and specifically informed them that demonstrative exhibits "have no evidentiary weight in and of themselves. They are only representative – they are only as strong as other evidence that is in the record, testimony, other exhibits." Hearing Tr. at 77:4-15. Nevertheless, Cypress relied exclusively on demonstrative exhibits and failed to cite to any actual evidence. The only explanation Cypress provides for not heeding the ALJ's instructions is its assertion that "because the underlying computer files would be useless to the ALJ, those demonstratives are appropriate evidence" and that "case law is clear that in this sort of complex technology case, where the underlying evidence would be inaccessible to the ALJ, demonstratives created by the experts should be considered evidence." Cypress Pet. at 9 (citing *Motorola, Inc. v. InterDigital Tech. Corp.*, 121 F.3d 1461, 1470 (Fed. Cir. 1997)). *Motorola*, however, does not support Cypress. In *Motorola*, the Federal Circuit found that the use of demonstrative evidence to depict prior art was proper where the party did not use the demonstrative as a "substitute for real prior art [*i.e.*,

evidence]" but rather presented a "rigorous comparison of the claims to the accused products and to the prior art." *Id.* In other words, the demonstrative in *Motorola* was used as an aid and not as a substitute for actual evidence as Cypress attempts to do in this investigation. [4]

Moreover, the record evidence shows that Cypress could have provided underlying evidentiary support for its demonstrative exhibits. As Respondents note, their expert did exactly that. *Compare* CX-385.1C at Q348 *with* RX-486C at Q280-329. Accordingly, the Commission affirms the ALJ's finding that Cypress failed to demonstrate that the [ ] infringes the asserted claims of the '805 patent.

With respect to the accused [ ] products, as the ALJ observed, "Cypress's argument is based solely on the fact that all [ ] products infringe because they contain the [ ]." ID at 17. Given his finding that the [ ] did not infringe the asserted claims of the '805 patent, the ALJ found that [ ] products also did not infringe the asserted patent claims. *Id.* The Commission affirms the ALJ's finding.

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[4] Cypress acknowledges that it offered to put the GDS and SEM files into evidence but that GSI objected and it did not "pursue the issue." Cypress Pet. at 22 n.16. Cypress's explanation for not pursuing the issue is that "[t]hose files themselves are not helpful or relevant; because McAlexander is an expert they do not need to be in evidence; and it is the demonstrative exhibits that Mr. McAlexander created from them that are helpful evidence." *Id.* As discussed above, the ALJ specifically informed the parties about the proper role of demonstrative evidence. Thus, Cypress's decision not to "pursue the issue" is an inadequate excuse for the files not being in evidence. In addition, Cypress's assertion that the GDS and SEM files are irrelevant but that demonstratives derived from them are relevant is illogical. If the files themselves are irrelevant, then demonstratives derived from those files would also be irrelevant.

2. Domestic Industry (Technical Prong)

a. Applicable Law

The technical prong of the domestic industry requirement is satisfied when the complainant in a patent-based section 337 investigation establishes that it is practicing or exploiting the patents at issue. *See* 19 U.S.C. §1337 (a)(2); *Certain Microsphere Adhesives, Process for Making Same and Prods. Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op. at 8, 1996 WL 1056095 (U.S.I.T.C. Jan. 16, 1996). "In order to satisfy the technical prong of the domestic industry requirement, it is sufficient to show that the domestic industry practices any claim of that patent, not necessarily an asserted claim of that patent." *Certain Ammonium Octamolybdate Isomers*, Inv. No. 337-TA-477, Comm'n Op. at 55 (U.S.I.T.C., Jan. 2004).[5]

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[5] Sections 337(a)(2) and (3) set forth the domestic industry requirement:

> **(2)** Subparagraphs (B), (C), (D), and (E) of paragraph (1) apply only if an industry in the United States, relating to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established.
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> **(3)** For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned—
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> **(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)(2) and (3). Under Commission precedent, this "domestic industry

The test for claim coverage for the purposes of the technical prong of the domestic industry requirement is the same as that for infringement. *Certain Doxorubicin and Preparations Containing* Same, Inv. No. 337-TA-300, Initial Determination at 109, 1990 WL 710463 (U.S.I.T.C., May 21, 1990), *aff'd*, Views of the Commission at 22 (October 31, 1990); *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003).

b. Whether Cypress Established the Technical Prong of the Domestic Industry Requirement for the '805 Patent

The ALJ found that Cypress failed to prove that any of the five products offered to establish a domestic industry in the '805 patent practiced the patent. ID at 19. Specifically, the ALJ found that Mr. McAlexander offered conclusory testimony and failed to explain how the demonstrative evidence he relied on "refer[ed] back to actual evidence in the record" and that "no testimony tie[d] Mr. McAlexander's testimony to the demonstrative exhibits or to any other exhibits in the record." *Id.* (citing CX-385.1 at Q/A 114-121).

The ALJ noted Cypress's reliance on demonstratives to prove its case and its argument that "Mr. McAlexander reviewed the evidence and formed his opinion" and that "[h]e did not need to spend dozens of pages reiterating it, or translating what the mask layouts and photos already show into written testimony." *Id.* (citing CRB at 65-66 (citing CX-385.1 at Q/A 114-121); CIB at 151-52; CX-297C, CDX-147C, and CDX-150C). The ALJ found Cypress's

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requirement" of section 337 consists of an economic prong and a technical prong. *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 12-14, 2009 WL 5134139 (U.S.I.T.C. Dec. 2009) ("*Stringed Instruments*"). **Error! Main Document Only.**The "economic prong" of the domestic industry requirement is satisfied when it is determined that the economic activities set forth in subsections (A), (B), or (C) of subsection 337(a)(3) have taken place or are taking place. *Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, USITC Pub. No. 3003, Comm'n Op. at 21 (Nov. 1996).

argument unpersuasive.

Cypress, in its petition for review, asserts that the ALJ "relies upon near-identical reasoning [to the ALJ's non-infringement finding] in stating that Cypress does not meet the technical domestic industry requirement for the '805 patent," namely that "Cypress's expert's testimony is conclusory, and that the demonstrative exhibits are not evidence." Cypress Pet. at 23. Cypress states that the "[t]he ID is flawed for the same reasons stated above for Cypress's infringement claims" and that Mr. McAlexander relied on GDS files and scanning electron microscope ("SEM") analysis to conclude that its domestic industry products satisfy the technical prong for domestic industry. As with the GDS files, Cypress acknowledges that it offered to put the SEM files into evidence but that GSI objected. *Id.* at 22, n.16. According to Cypress, because the SEM files "would in any event be useless to the ALJ or on appeal, Cypress did not pursue the issue," adding that [t]hose files themselves are not helpful or relevant; because McAlexander is an expert they do not need to be in evidence; and it is the demonstrative exhibits that Mr. McAlexander created from them that are helpful evidence." *Id.*

For reasons stated above with respect to infringement (in addition to the reasons provided in the ID), the ALJ's finding that Cypress failed to establish the technical prong for domestic industry is not in error. Specifically, we agree with the ALJ that Mr. McAlexander offered conclusory testimony and failed to explain how the demonstrative evidence he relied on "refer[ed] back to actual evidence in the record" and that "no testimony tie[d] Mr. McAlexander's testimony to the demonstrative exhibits or to any other exhibits in the record." ID at 18-19 (citing CX-385.1 at Q/A 114-121).

3. Invalidity

a. Applicable Law on Anticipation

"Claimed subject matter is 'anticipated' when it is not new; that is, when it was previously known." *Sanofi-Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1082 (Fed. Cir. 2008). "Invalidation on this ground requires that every element and limitation of the claim was previously described in a single prior art reference, either expressly or inherently, so as to place a person of ordinary skill in possession of the invention." *Id.* A prior art reference that does not expressly set forth a particular claim element, may still anticipate the claim if the missing element is inherently disclosed by the reference. *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002); *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherent anticipation occurs when "the missing descriptive material is 'necessarily present,' not merely probably or possibly present, in the prior art." *Id.* To be considered anticipatory, the prior art reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000).

A patent is presumed valid. 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2242 (2011). A respondent who has raised patent invalidity as an affirmative defense has the burden of overcoming this presumption by clear and convincing evidence. *Microsoft,* 131 S. Ct. at 2242. Since the claims of a patent measure the invention at issue, the claims must be interpreted and given the same meaning for purposes of both validity and infringement analyses. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001). As with an infringement analysis, an analysis of invalidity involves two steps:

determining the scope of the claim and comparing the properly construed claim with the prior art to determine whether the claimed invention is anticipated and/or rendered obvious.

b. Whether the Ishida IEDM reference Anticipates the Asserted Claims of the '805 Patent

The ALJ rejected Respondents' argument that a publication by Ishida, entitled "Novel 6T-SRAM Cell Technology Designed with Rectangular Patterns Scalable beyond 0.18 μm Generation and Desirable for Ultra High Speed Operation" ("Ishida IEDM") anticipates claim 1 of the '805 patent. RID at 32-37. The sole reason for the ALJ's finding stems from his view that "Ishida IEDM is entirely silent regarding the proportions of those features, and the figures contained therein are at best representative and not drawn to any scale," relying on *Hockerson-Halberstadt, Inc. v. Avia Grp. Int'l*, 222 F.3d 951, 956 (Fed. Cir. 2000); *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1268 (Fed. Cir. 2012); and *In re Wright*, 569 F.2d 1124, 1127 (C.C.P.A. 1977). We reverse the ALJ's finding because Ishida IEDM is not entirely silent regarding proportions of features and the figures contained therein.

The ALJ cited *Hockerson*, *Krippelz*, and *Wright* for the proposition that patent drawings do not necessarily define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely *silent* on the issue. RID at 34 (emphasis added). We disagree with the ALJ that Ishida IEDM is entirely silent regarding proportions of features and the figures contained therein. Indeed the Ishida IEDM reference is replete with discussions of dimensions of the drawings. For example, the abstract states:

> A novel 6T-SRAM cell layout designed with rectangular patterns has been developed. Employing this layout, 4.13 μm² and 5.33 μm² cells with word transistor width of 0.25 μm and 0.75 μm are obtained, respectively, based on the 0.20 μm rule. Among the various layouts of

> 6T-SRAM cells, this layout provides minimum cell sizes and the smallest bit line capacitance with word transistor width over 0.75 μm for the ultra high speed operation. . . . The cell layout proposed also provides the excellent scalability beyond 0.18 μm generation due to its highly simplified pattern design.

RX-464 at GSI00000364 (Abstract). The reference discloses various layout variations in Table 1 as: "Type-1a cell" and "Type-1b cell" (Category 1), "Type-2 cell" (Category 2), "Type-3 cell" (Category 3), and "Type-4 cell" (Category 4)." *Id.* at GSI00000366. As can be seen in the reference, these layout variations depict the different relative proportions, orientations, positions, widths and lengths of the different regions and structures of each of the different layouts by which actual memory cells can be fabricated. The SEM images of actually fabricated memory cells in Figure 3 for three of the five layouts provided in Table 1 provides confirmation. *Id.* at GSI00000364 (right column) ("Proposed type-1b cell is designed with the 0.20 μm rule for electrical evaluation as shown in Figs. 2, 3 and 4."); ("A new type-1b cell is proposed as shown in Figs. 2 and 3."). In addition, respondents' expert Dr. Gosney testified that "[t]he drawings show to a high degree of accuracy the proportions of the various features, and I think they're more than representative and could be adjusted to any particular scale by one of skill in the art." RX-353.1, Q134.

While we agree with Cypress that the reference does not spell out specific dimensions for the Type-4 cell, the cell Respondents rely on, it would be anomalous for the publication to depict all its figures to scale except for the Type-4 cell. Moreover, the SEM images below show that the cell layout variations detailed in Table 1 are faithful to dimensional differences detailed in the text, figures and other tables of Ishida IEDM.

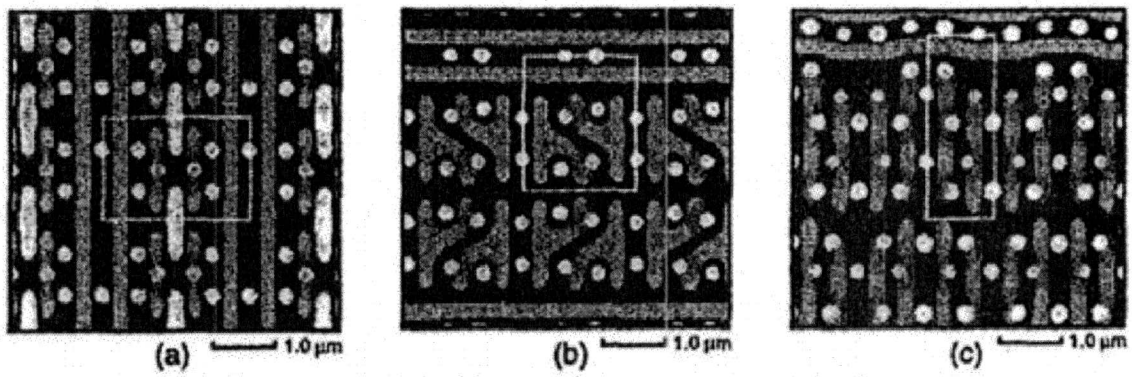

Fig.4: SEM images of SRAM cells after 1st contact fabrication; (a) type-1b cell (1.72 x 2.40 = 4.13 µm^2), (b) type-2 cell (1.84 x 2.25 = 4.14 µm^2), (c) type-3 cell (1.08 x 3.15 = 3.40 µm^2).

Thus, in our judgment, the ALJ erred by finding that Ishida IEDM is entirely silent regarding proportions of features and the figures contained therein. In addition, we note that *Hockerson*, *Krippelz*, and *Wright* are directed to patent drawings in particular and not to printed publications in general. Ishida IEDM is not a patent publication but a technical publication appearing in the IEEE's 1998 International Electronic Devices Meeting Technical Digest. Thus, the cases that the ALJ relies on do not specifically address the Ishida IEDM reference.

The only remaining dispute as to whether Ishida IEDM discloses the asserted claims of the '805 patent centers on whether Ishida IEDM's disclosure of rectangular cells discloses the "substantially oblong cells" recited in the asserted claims. Respondents argue that Ishida IEDM's description of the rectangular cells discloses the substantially oblong cells of the '805 patent as construed by the ALJ. Cypress disagrees and argues that the '805 inventors specifically claimed substantially oblong cells instead of rectangular cells because substantially oblong cells have a superior beta ratio.

We agree with Respondents that the rectangular cells described by Ishida IEDM disclose the substantially oblong cells of the '805 patent as construed by the ALJ. The ALJ construed the

claim term "substantially oblong active region" as:

> an active region: (1) the length of which is substantially constant and the width of which varies by approximately one-third or less along the length of the region; (2) the length of which is substantially constant and the width of which by design varies only with respect to the widths of the access and latch transistors; or (3) the length of which is greater than or equal to approximately three times its maximum width; and (4) which does not include markedly L-shaped regions.

See ID at 36; Order No. 29 at 7-8. There is no credible dispute that Ishida IEDM discloses the above limitation. Cypress's expert admitted that the reference discloses the recited "substantially oblong active region" as construed by the ALJ if the construction does not preclude a rectangular active region. McAlexander, Tr. at 656:10-657:11. The ALJ's construction does not exclude rectangular active regions from its scope, and nothing in the '805 patent excludes rectangular active regions. Indeed, the '805 patent describes rectangular active regions. *See, e.g.*, '805 Patent, FIG. 2. Thus, we find that Ishida IEDM anticipates the asserted claims of the '805 patent.

c. Whether Osada or Ishida '041Anticipates the Asserted Claims of the '805 Patent

The ALJ found unpersuasive Respondents' contention that embodiments 3 and 4 described in U.S. Patent No. 6,677,649[6] to Osada et al. ("Osada") anticipate claim 1 of the '805 patent. ID at 38. The ALJ observed that "[t]he arguments presented by the parties are essentially the same as those presented above with respect to Ishida IEDM – namely, whether the diagrams in Osada are drawn to scale and reflect the relationship of width to length required by the undersigned's claim construction in Order No. 29." The ALJ found that as with the Ishida IEDM reference, "there is nothing in Osada stating what the relationship is between the length

[6] The RID erroneously identifies the patent to Osada et al. as U.S. Patent No. 6,667,649.

and width of the diagrams set forth in Embodiments 3 and 4" and concluded that "Respondents have failed to demonstrate by clear and convincing evidence that the diagrams in Embodiments 3 and 4 of Osada reflect the relationship between width and length set forth in the undersigned's claim construction in Order No. 29."

Similarly, the ALJ found that Respondents failed to establish that U.S. Patent No. 6,445,041 to Ishida et al. ("Ishida '041") anticipates claim 1 of the '805 patent. ID at 39-44. Specifically, he found that Respondents failed to establish that Ishida '041 discloses the "substantially oblong active areas" limitation because, as with Ishida IEDM and Osada, "there is no intrinsic language in Ishida '041 to indicate the relative dimensions of length and width of Figure 19. *Id.* at 40.

The Commission affirms the ALJ's finding that Respondents failed to establish by clear and convincing evidence that either Osada or Ishida '041 anticipates the asserted claims of the '805 patent. As the ALJ found, the Osada and Ishida '041 patents do not indicate that their drawings are to scale. *Hockerson-Halberstadt*, 222 F.3d at 956 ("It is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue."). Respondents rely primarily on their argument that Osada and Ishida '041 are directed to SRAMs (memory cell layouts) and that cell layout drawings are fundamental to communicating the relative form, size proportion and placement of the regions, structures and connections that make up a memory cell. While Respondents' argument has some appeal, the specifications of Osada and Ishida '041 do not make clear that the drawings contained in those patents define the precise proportions of the elements depicted. Thus, the ALJ did not err in his finding that Respondents failed to establish

by clear and convincing evidence that either Osada or Ishida '041 anticipates the asserted claims of the '805 patent.

B. The '134 Patent

Cypress has asserted independent claim 1 and dependent claims 2 and 12–15 in this investigation. Claim 1 recites:

> A circuit comprising:
>
> a memory comprising a plurality of storage elements each configured to read and write data in response to an internal address signal; and
>
> a logic circuit configured to generate a predetermined number of said internal address signals in response to (i) an external address signal, (ii) a clock signal and (iii) one or more control signals, wherein said generation of said predetermined number of internal address signals is non-interruptible.

'134 patent, col. 5, l. 22 – 32 (claim 1).

1. Infringement and Domestic Industry Findings

The Commission affirms the ALJ's infringement and domestic industry (technical prong) findings for the reasons provided in the ID. *See* ID at 22-31.

2. Invalidity

a. Whether U.S. Patent No. 5,386,385 to Stephens, Jr. Anticipates the Assert Claims of the '134 patent

The Commission agrees with the ALJ that Respondents failed to show by clear and convincing evidence that U.S. Patent No. 5,386,385 to Stephens, Jr. ("Stephens") anticipates the asserted claims of the '134 patent and affirms his findings. Specifically, the Commission shares the ALJ's finding that Respondents failed to show by clear and convincing evidence that

Stephens discloses the "non-interruptible" limitation of claim 1 of the '134 patent. ID at 11.

In addition, the Commission finds that Stephens also fails to disclose the claim limitation that "generation of said *predetermined* number of internal address signals is non-interruptible." '134 patent, claim 1 (emphasis added). Respondents argue that "the counters 48-54 disclosed in Stephens generate the internal address signals during a burst access and, although the burst length can be changed ***before*** beginning a burst operation by changing the value stored in the mode register, during a burst operation, the burst length is fixed and cannot be changed or stopped." Resp. RID Pet. at 12-13 (citing RX-354C, Q356; *see also id.*, Q357; RX-476, cols. 5:34-35, 7:23-33, 8:36-52). That is, respondents concede that "the burst length can be changed ***before*** beginning a burst operation by changing the value stored in the mode register." The burst length therefore is not predetermined as required by the claims. *See* CX-428C, Q57, 61 ("the burst length only may be changed 'prior' to the burst command."). As Cypress points out, the "'mode register' tells the device how many 'chunks' of data to send," and because that number may be changed at any time, by definition, it is not fixed. Cypress RID Resp. at 8.

There is no dispute that Stephens receives a "Read" or "Write" command at the same time that the mode register is checked and that the burst length can vary up to and including the very moment that the circuit begins reading or writing. CDX-593C, RX-476. Respondents' reliance on their argument that "during a burst operation, the burst length is fixed," is unhelpful because whether the burst length is fixed during the burst operation or not does not reveal that the burst length was predetermined, *i.e.*, fixed ahead of time. The asserted claims require a burst length that is predetermined, by definition a burst length fixed before the burst begins. There is no dispute that Stephens does not disclose a burst length that is fixed before burst begins. Thus,

Respondents have failed to establish by clear and convincing evidence that Stephens anticipates the asserted claims of the '134 patent.

The ALJ also found that Respondents violated his ground rules and that "[i]nstead of clearly setting forth how each and every limitation of claim 1 is met by Stephens, Respondents appear to rely on the fact that certain limitations in claim 1 are 'undisputed.'" RID at 9 (citing RIB at 47-48; RRB at 19). The ALJ emphasized that Respondents bear the burden of proving by clear and convincing evidence that each and every claim element is disclosed in the prior art reference and that "nowhere in the post-hearing briefing does Cypress ever state that any of the limitations of claim 1 are present in the prior art." *Id.* The ALJ added that Respondents relied on "conclusory statements with string cites to their expert's testimony" and that "[m]erely citing the testimony and demonstrative exhibits of a party's expert or portions of a prior art patent without any explanation not only fails to constitute 'a discussion' of the issue in the post-hearing brief as required by the Ground Rules, but is insufficient to prove that a patent is invalid by clear and convincing evidence." *Id.* at 10 (citing RIB at 47).

Respondents disagree with the ALJ and argue that ALJ repeats fundamentally the same error that the Commission recently reversed him for in *Certain Automated Media Library Devices*, Inv. No. 337-TA-746, Comm'n Op. (Pub. Version) at 51-56 (Nov. 19, 2012). Resp. RID Pet. at 7-10. According to Respondents, they provided "at least the same level, if not a greater level, of disclosure and discussion of how Stephens anticipates claim 1 as the level of disclosure and discussion present in *Certain Automated Media Library Devices*." *Id.* at 10. Respondents miss the import of *Automated Media Library Devices*. In *Automated Media Library Devices*, the Commission recognized the importance of the ALJ's Ground Rules for

managing the proceedings before him but stated that "[i]n this particular instance, however, the evidence and analysis presented" is not contested. *See also Certain Mobile Devices, Associated Software, and Components Thereof, Inv.* No. 337-TA-744, Comm'n Op. at 13-14 (June 5, 2012) (same). The ALJ found and Cypress reiterates that nowhere in its briefing does Cypress ever concede that any of the limitations of claim 1 are present in the prior art. RID at 9; Cypress RID Resp. at 7 (citing CX-428C Q/A 57, 61). Because the issues were contested, *Automated Media Library Devices* does not apply. Respondents should have complied with the ALJ's grounds rules, especially here, where they bore the burden of proving invalidity by clear and convincing evidence.

b. Whether U.S. Patent No. 5,268,865 to Takasugi Anticipates the Asserted Claims of the '134 patent

The Commission agrees with the ALJ that Respondents failed to establish by clear and convincing evidence that U.S. Patent No. 5,268,865 to Takasugi ("Takasugi") anticipates claim 1 of the '134 patent. ID at 12-13. As the ALJ found, Respondents failed to prove that Takasugi discloses the "non-interruptible" limitation of claim 1. *Id.* Specifically, the ALJ observed that Respondents' expert, Mr. Murphy, "admitted on cross-examination that, at least for one embodiment, setting $\overline{CAS}$ high (*i.e.*, set to one) will stop the burst of data and that at most, one final piece of data may be output until $\overline{CAS}$ is changed to zero (*i.e.*, lowering the CAS bar)." *Id.* (citing Murphy, Tr. at 583:11-25).

No one disputes that in Takasugi, the $\overline{CAS}$ control line creates the burst and the burst continues as long as $\overline{CAS}$ is kept at zero, but that when $\overline{CAS}$ goes from zero to one, the burst stops. RX-475 at col. 5, ll. 35-50; CX-428C Q/A 72-73; CDX-595C; CDX-630C. Respondents'

entire petition hinges on their argument that the ALJ's reliance on their expert's testimony that "at least for one embodiment, setting $\overline{CAS}$ high (*i.e.*, set to one) will stop the burst of data and that at most, one final piece of data may be output until $\overline{CAS}$ is changed to zero (*i.e.*, lowering the CAS bar)" is in error. RID at 13; Murphy Tr. at 583:11-25. Respondents contend that the ALJ relies on only one example in the Takasugi reference and "ignores the other examples disclosed in Takasugi that show non-interruptible generation of internal address signals even when *CAS* goes high" and that case law establishes that the disclosure of multiple examples in a prior art reference does not negate the anticipatory examples in the reference. Resp. RID Pet. at 17-20 (citing *Legett & Platt, Inc. v. VUTEK, Inc.*, 537 F.3d 1349, 1355-56 (Fed. Cir. 2008); *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1376 (Fed. Cir. 2005)).

Respondents, however, fail to establish that the other alleged examples disclosed in Takasugi show non-interruptible generation of internal address signals even when $\overline{CAS}$ goes high. In attempting to show those other examples, Respondents rely on Figure 7 of Takasugi, the same figure its expert admitted on cross-examination that setting $\overline{CAS}$ high will stop the burst of data. *Id.* With respect to Figure 7 of Takasugi Respondents' expert, Mr. Murphy, testified as follows:

> Q. Takasugi is RX-475. We can start at figure 7.
>
> A. I have figure 7.
>
> Q. As long as the CAS bar signal is high, data output is halted. Correct?
>
> A. Only for this figure. The specification talks about another possible embodiment.

Murphy Tr. at 583:3-10. In other words, specifically with respect to figure 7, Mr. Murphy admitted that setting $\overline{CAS}$ high will stop the burst of data. Respondents while accusing the ALJ of ignoring other embodiments also ignore those alleged other embodiments and rely on figure 7. Because respondents cite nothing to substantiate their assertion that "other examples disclosed in Takasugi show non-interruptible generation of addresses even when $\overline{CAS}$ goes high," the ALJ's finding is not error.

As with Stephens, a basis for the ALJ finding that Respondents failed to prove that Takasugi anticipates the asserted claims stems from his finding that Respondents relied on conclusory statements in violation of his ground rules. As discussed above with respect to Stephens, *Automated Media Library Devices* does not lessen a party's burden of proving invalidity by clear and convincing evidence.

C. The '937 Patent

Cypress has asserted independent claim 1 and dependent claims 6, 12, and 13 in this investigation. Claim 1 recites:

> A random access memory comprising:
>
> a random access memory array configured to transfer data to random write addresses and from random read addresses in said random access memory array in response to a periodic signal;
>
> a data input bus connected to said random access memory array;
>
> a data output bus connected to said random access memory array; and
>
> an address bus connected to said random access memory array and configured to provide said random read addresses and said random write addresses, wherein said periodic signal is configured to control data transfer operations (i) to said random access memory

> array in response to a first transition of said periodic signal and (ii) from said random access memory array in response to a second transition of said periodic signal, wherein said second transition of said periodic signal is complementary to said first transition of said periodic signal.

'937 patent, col. 11, l. 42-61 (claim 1).

1. Infringement and Domestic Industry (Technical Prong) Findings

Cypress in its petition for review challenges the ALJ's finding that the accused products do not infringe the asserted claims of the '937 patent. Cypress Pet. at 62. Cypress, however, does not directly challenge the ALJ's factual findings but disputes the ALJ's interpretation of the scope of the claims and the plain meaning of the claim term "to." The ALJ provided detailed reasoning why the accused products do not infringe the asserted claims and why the domestic industry products do not practice the patent. *See* ID at 31-46. The Commission affirms the ALJ's infringement and domestic industry findings with respect to the '937 patent for the reasons provided in the ID. *Id.* However, the ALJ did not specifically comment on Cypress's claim differentiation argument. The Commission finds the argument unpersuasive for the reasons below.

a. Applicable Law on Claim Differentiation

Differences between claims may be helpful in understanding the meaning of claim terms. *Phillips v. AWH Corp.,* 415 F.3d 1303, 1314 (Fed. Cir. 2005). A claim construction that gives meaning to all the terms of a claim is preferred over one that does not do so. *Merck &* Co. *v. Teva Pharms. USA, Inc.,* 395 F.3d 1364, 1372 (Fed. Cir. 2005). In addition, the presence of a specific limitation in a dependent claim raises a presumption that the limitation is not present in the independent claim. *Phillips,* 415 F.3d at 1315. This presumption of claim differentiation is

especially strong when the only difference between the independent and dependent claim is the limitation in dispute. *SunRace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003). "The presumption that separate claims have different scope, however, 'is a guide, not a rigid rule.'" *ATD Corp. v. Lydall Inc.*, 159 F.3d 534, 541 (Fed. Cir. 1998) (citations omitted).

b. Construction of the claim term "data transfer operations"

The ALJ found that the accused products do not practice the limitation "wherein said periodic signal is configured *to* control data transfer operations (i) to said random access memory array in response to a first transition of said periodic signal and (ii) from said random access memory array in response to a second transition of said periodic signal." ID at 33. The ALJ did not specifically construe the claim term "to" but applied its plain and ordinary meaning. ID at 35 n.10 (citing Order No. 29 at 2 ("**All** other claim terms shall be deemed undisputed and shall be interpreted by the undersigned in accordance with 'their ordinary meaning as viewed by one of ordinary skill in the art.'").

Cypress accuses the ALJ of ignoring the doctrine of claim differentiation. Cypress Pet. at 67. Specifically, Cypress argues that dependent claim 2 (not asserted in this investigation) "covers chips that 'have a write circuit configured to write said data into [memory] . . . in response to one transition of said periodic signal." *Id.* (citing '937 patent, claim 2). Cypress explains that under the doctrine of claim differentiation, claim 2 must be narrower than claim 1 and so the claim limitation "write circuit configured to write said data into [memory] . . ." recited in claim 2 cannot be read into claim 1. *Id.* at 67-68. According to Cypress, "[t]his means 'configured to control data transfer operations' on the chip in Claim 1 must mean something other than merely having a write circuit writing data into a memory cell under clock control,"

and that "'the presumption of claim differentiation is 'especially strong'" because 'the limitation in dispute is the only meaningful difference between [the] independent claim [Claim 1] and dependent claim [2].'" *Id.* at 68 (citing *InterDigital Communs., LLC v. Int'l Trade Comm'n*, 690 F.3d 1318, 1325 (Fed. Cir. 2012)). Cypress argues that the text of the claims 1 and 2 provide further support and that in claim 1 the patentees chose broad language "configured to control data transfer operations," whereas in claim 2 the patentees used the narrower language "configured to write said data into [memory] . . . in response to one transition of said periodic signal."). *Id.* at 68 (emphasis omitted).

Federal Circuit precedent makes clear that claim differentiation does not apply when a dependent claim includes other limitations in addition to the limitation at issue. *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1325-26 (Fed. Cir. 2001); *Black and Decker, Inc. v. Robert Bosch Tool Corp.*, 260 Fed. Appx. 284, 290 (Fed. Cir. 2008) (unpublished). Dependent claim 2 includes other limitations besides the limitation Cypress points to. For example, claim 2 recites that "said one transition being either a rising transition or a falling transition." This limitation does not appear in independent claim 1 and so the doctrine of claim differentiation does not apply.

Moreover, Cypress's argument has no merit. Cypress argues that dependent claim 2 "covers chips that have a write circuit configured to write said data into [memory] . . . in response to one transition of said periodic signal," and "[t]his means 'configured to control data transfer operations' on the chip in Claim 1 must mean something other than merely having a write circuit writing data into a memory cell under clock control." Cypress Pet. at 67. Cypress, it appears, misunderstands the ALJ's finding. The ALJ found that claim 1 "requires data transfer

operations to write data into, or read data from, the random access memory array." ID at 35. In other words, the periodic signal has to control the transfer of the data to its destination, *i.e.* the random access memory array. Claim 1 does not cover how the data is written into the memory array. Importantly, claim 1 does not claim a "write circuit." Dependent claim 2, on the other hand, specifically claims "a write circuit configured to write said data into said random access memory array . . . ." Thus, claim 1 is broader than claim 2 in at least that respect and the doctrine of claim differentiation does not apply. *See Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1342 (Fed. Cir. 2010) ("Because claim 1 is broader than claim 14 under the district court's construction, this case simply does not implicate the doctrine of claim differentiation.").

2. Invalidity

a. Whether U.S. Patent No. 5,973,989 to Pawlowski Anticipates the Asserted Claims of the '937 Patent

The Commission affirms the ALJ's finding that Respondents failed to prove by clear and convincing evidence that U.S. Patent No. 5,973,989 to Pawlowski ("Pawlowski") anticipates the asserted claims of the '937 patent. RID at 18-19. Specifically, we agree with the ALJ that Pawlowski fails to disclose the claimed periodic signal "configured to control data transfer operations (i) to said random access memory array in response to a first transition of said periodic signal and (ii) from said random access memory array in response to a second transition of said periodic signal, wherein said second transition of said periodic signal is complementary to said first transition of said periodic signal." RID at 18. Respondents argue that Pawlowski discloses this element in its specification at column 1, lines 18-23, since it discloses that data is transmitted and received by the memory circuits 12, 14 "at both the rising edge and the falling

edge of the clock signal." RX-354C, Q609. However, the passage that Respondents rely upon simply teaches that access to memory devices is triggered once per clock cycle and can happen at either the rising edge or the falling edge of the clock signal. The passage states:

> Synchronous memory devices, such as static random access memory (SRAM) and dynamic random access memory (DRAM), are triggered by an externally supplied clock signal. Typically, access to the memory device is triggered once per clock cycle, at either the rising edge or the falling edge of the clock.

Pawlowski, col. 1, ll. 25-30. This passage does not teach a periodic signal "configured to control data transfer operations (i) to said random access memory array in response to a first transition of said periodic signal and (ii) from said random access memory array in response to a second transition of said periodic signal, *wherein said second transition of said periodic signal is complementary to said first transition of said periodic signal.*" (emphasis added).

The other portions of Pawlowski upon which Respondents rely likewise fail to disclose the claimed "wherein said second transition of said periodic signal is complementary to said first transition of said periodic signal" limitation For example, Respondents also rely on the passage of Pawlowski stating that:

> The CCL 18 provides control signals to the memory circuits 12, 14. A byte write enable rising BWER# signal and a byte write enable falling BWEF# signal control whether data writes to the memory circuits 12, 14 are initiated at the rising edge, the falling edge, or both rising and falling edges of the CLK signal.

Pawlowski, col. 4, ll. 7-12. This passage teaches that data writes to the memory circuits can be initiated at the rising edge, the falling edge, or both rising and falling edges of the CLK signal. It does not disclose controlling data transfer operations to a memory array in response to a first transition of a periodic signal and from the random access memory array in response to a second

transition of the periodic signal, wherein the second transition of the periodic signal is complementary to the first transition of said periodic signal as required by claim 1. It only deals with writing data and says nothing about reading data.

In sum, we agree with the ALJ and Cypress that Pawlowski does not disclose use of complementary clock edges to control transfer data.

b. Whether Certain Prior Art Renders the Asserted Claims of the '937 Patent Obvious

i. Applicable Law on Obviousness

Under 35 U.S.C. § 103, a patent may be found invalid for obviousness 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." 35 U.S.C. § 103(a).

ii. Whether Pawlowski in combination with Kumanoya and/or Sakaue Render the Asserted Claim 12 of the '937 Patent Obvious

Respondents argued that Pawlowski in combination with U.S. Patent No. 4,954,992 to Kumanoya et al. ("Kumanoya") or U.S. Patent No. 5,276,837 to Sakaue ("Sakaue") rendered claim 12 of the '937 patent obvious. ID at 20. The ALJ observed that claim 12 depends from claim 1 and adds the limitation "wherein each of said data input bus and said data output bus is unidirectional." *Id.* (citing JX-4 at 14:1-3). The ALJ noted Respondents' argument that Kumanoya and Sakaue "each disclose the additional limitation of claim 12." (RIB at 85.) The ALJ, however, pointed to his previous finding that Pawlowski does not anticipate claim 1 of the '937 patent, and noted that "Respondents have not presented any arguments that Kumanoya or Sakaue cure the deficiencies of Pawlowski with respect to claim 1." *Id.* Accordingly, the ALJ

found that "because the Pawlowski, Kumanoya, and/or Sakaue combination does not meet all of the limitations of independent claim 1," Respondents have failed to show, by clear and convincing evidence, that the additional limitations in claim 12 are rendered obvious by the combination of Pawlowski, Kumanoya, and/or Sakaue. *Id.* [Check page cite]

As discussed above, we agree with the ALJ that Pawlowski fails to anticipate independent claim 1 of the '937 patent. Respondents do not argue that either Kumanoya or Sakaue supply the features we find missing in Pawlowski. Thus, a combination of Pawlowski, Kumanoya, and/or Sakaue cannot render claim 12 obvious.

D. The '477 Patent

Cypress has asserted independent claim 8 and dependent claim 9 of the '477 patent in this investigation. Claim 8 recites:

> A method for accessing an array of storage elements, comprising:
>
> storing upon an input to a multiplexer a write address sent over a write address path;
>
> sending upon another input to the multiplexer a read address sent over a read address path in parallel with the write address path;
>
> sensing read data from the array of storage elements sent across a read data path read data accessed by the read address; and
>
> while sensing read data, sending write data across a write data path to be written to the array at the write address.

'477 patent, col. 10, l. 21-32 (claim 8).

1. Infringement

a. Whether Use of the Accused Products Infringes the Asserted Claims of the '477 Patent.

The Commission affirms the ALJ's finding that Cypress failed to prove by a preponderance of the evidence that use of the accused products infringes the asserted claims of the '477 patent. The Commission, however, clarifies that the claim term "while sensing read data, sending write data across a write data path to be written to the array at the write address" requires actual movement of write data during the time that the read data is being sensed (or detected).

Cypress argues that "moving" within the context of the ALJ's construction of the claim limitation does not require actual movement but simply requires an ability to move. Cypress Pet. at 83. We note that "moving" is not a claim term. The claim limitation at issue states: "while sensing read data, sending write data across a write data path to be written to the array at the write address." The parties agreed to construe "sensing read data" to mean "detecting read data," "sending write data across a write data path" to mean "moving write data across a write path," and "while" to mean "partially concurrent or concurrent." ID at 48 (citing Order No. 29 at 20-21). Based on those constructions, the ALJ concluded that "'while sensing read data, sending write data across a write data path to be written to the array at the write address' requires that the detecting of read data occur partially concurrent or concurrent with the *moving* of write data across a write path to be written to the array at the write address." *Id.* at 48-49 (emphasis added).

The parties then disputed what "moving" entailed. *Id.* at 49. The ALJ found that the ordinary meaning of "moving" is: "that is marked by or capable of movement: that is not fixed or

stationary." *Id.* at 49 (citing Order No. 29 at 2; *Gemstar-TV Guide Int'l, Inc. v. Int'l Trade Comm'n*, 383 F.3d 1352, 1368 (Fed. Cir. 2004) (citing Webster's Third New International Dictionary (1993)). Based on that ordinary meaning of "moving," the ALJ concluded that "the write data may not be fixed or stationary, and instead must be marked by or capable of movement." *Id.* While the ALJ stated that "moving" could mean "capable of movement," he specifically found that that claim 8 is expressly directed to the "sensing read data" portion of the read operation limitation and not to the read operation in its entirety, and that to prove infringement, Cypress had to show that "while read data is being sensed, write data is sent across a write data path to the array." *Id.* at 51-52 (citing '477 patent, col. 10, ll. 31-32 ("while sensing read data, sending write data across a write data path to be written to the array at the write address")). In other words, the ALJ required actual movement and not merely the ability to move. Because Cypress failed to show actual movement of write data while read data is being sensed, the ALJ found that Cypress failed to meet the claim limitation.

We agree with the ALJ's analysis. Importantly, claim 8 recites method steps, and thus for infringement, the accused products must actually practice the method steps. *Joy Techs, Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed. Cir. 1993) ("A method claim is *directly* infringed only by one practicing the patented method.) (emphasis in original). Under Cypress's view that "capable of moving" and not actual movement is sufficient, infringement of the method claim would occur even though the accused device does not practice the method steps. This, in our view, is not correct. *Id.*

Cypress points to the specification as allegedly contradicting the ALJ's requirement that "moving" means "continuous movement." Cypress Pet. at 86. The ALJ, however, imposed no

such requirement. He simply found that the claim limitation "while sensing read data, sending write data . . ." requires actually moving (*i.e.* sending) write data at some point during the period when the read data is being sensed. The specification supports this understanding. For example, as Cypress itself notes, "while sensing read data sending write data across a write data path to be written to the array at the write address" "begins when the sense amplifiers 78 ('SA') start sensing the data pulled from the bit lines ('dl' and 'dlb'), while the write drivers 82 ('WR DVR') concurrently drive the write onto the bit lines." *See* Cypress Pet. at 87; 477 patent, col. 8 l. 64 – col. 9, l.2; Figure 5. This disclosure teaches that write data is actually moving towards the array while read data is being sensed.

In addition, *Gemstar* does not support Cypress. As noted above, "moving" is not a claim term, but a word the parties used to construe a claim term. However, even if "moving" were a claim term, *Gemstar* would provide no support for Cypress. Specifically, in *Gemstar*, while the Court observed that a dictionary definition for "moving" was "marked by or capable of movement: that is not fixed or stationary," the Court found that the claim language encompassed any type of *movement*, regular or irregular movement. *Gemstar*, 383 F.3d at 1368-69 (emphasis added). The Court did not construe the claim term to include no movement, as Cypress suggests. *Id.*

Moreover, as respondents point out, a "particular term used in one patent need not have the same meaning when used in an entirely separate patent, particularly one involving different technology." *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1318 (Fed. Cir. 2005). Given that "moving" is not even a claim term but merely a word that the parties employed to explain a claim term, this principle would apply with even stronger force. For these additional reasons the

Commission affirms the ALJ finding that Cypress failed to prove by a preponderance of the evidence that use of the accused products infringes the asserted claims of the '477 patent.

Given that Cypress has failed to establish direct infringement, a prerequisite for any indirect infringement finding, there is no need for the Commission to consider Cypress's indirect infringement contentions. *See Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Comm'n Op. (Dec. 21, 2011); *Epcon Gas Sys. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033 (Fed. Cir. 2002) ("To prevail on a claim of induced infringement, in addition to inducement by the defendant, the patentee must also show that the asserted patent was directly infringed.").

2. Invalidity

a. Whether Hronik Anticipates the Asserted Claims of the '477 Patent.

The ALJ found that Respondents failed to establish that U.S. Patent No. 7,069,406 to Hronik ("Hronik") anticipates the asserted claims of the '477 patent. RID at 23. Specifically, the ALJ found that Respondents presented inadequate arguments to support their contention, pointing out that Respondents devoted only five sentences, presenting conclusory arguments, to advance their anticipation position. *Id.* at 23 (citing RIB at 123). Respondents disagree with the ALJ. However, as discussed above, *Automated Media Library Devices* concerned an instance where the evidence and analysis presented was not contested. In contrast, the ALJ found that "[d]espite bearing the burden of proof on invalidity, and rather than adequately setting forth their position, Respondents focus on discrediting Cypress's criticism of Respondents' anticipation argument" and that "[s]uch conclusory assertions do not constitute clear and convincing evidence for as previously noted, merely citing the testimony of a party's expert or portions of a prior art

patent without *any* explanation not only fails to constitute a 'discussion' of the issue in the post-hearing brief as required by the Ground Rules, it is also insufficient to prove that a patent is invalid by clear and convincing evidence." RID at 24 (citing RIB at 121-23; RRB at 60). As noted above, parties are required to comply with the ALJ's ground rules.

In any event, the Commission finds that Respondents failed to establish by clear and convincing evidence that Hronik anticipates the asserted claims of the '477 patent. Specifically, Hronik fails to disclose the claim limitation "while sensing read data, sending write data across a write data path to be written to the array at the write address." 477 patent, col. 10, ll. 31-32 (claim 8). That is, claim 8 requires sensing and sending to "the array of storage elements," *i.e.* *one* array of storage elements, not multiple arrays. Respondents argue that the multiple memory blocks of Hronik disclose this limitation. Resp. RID Pet at 47. The claim language and specification do not support Respondents' argument. The claim recites "a method for accessing *an* array of storage elements," contemplating a single array. This is supported by the specification describing, for example, how the array requires a set of sense amplifiers. Indeed all the descriptions in the specification disclose a single array, and not multiple arrays. *See* '477 patent (JX-3) col. 8, ll. 3-6; Fig. 4.

In addition, as Cypress explains, "unlike conventional prior art SRAMs that can do only one thing in a given clock cycle—either a read or a write—the dual bus architecture of the '477 patent allows concurrent, or overlapping, accesses." Cypress RID Resp. at 30; CX-385.1C Q/A 54. "That architecture allows a write access and a read access to occur in a single clock cycle, increasing the speed of the read-write cycle." *Id.* In contrast, argues Cypress, "[e]ach of Hronik's two memory blocks (*See* RX-214 (Hronik patent), Figure 1, 20 and 30) is an

independent memory array responding to a *different* clock signal. CX-428C Q/A 216; CDX- 638; RX-214." Hronik, therefore, deviates from the objective of the '477 patent. The record evidence further shows that to an ordinarily skilled artisan, "the interleaving of data from two separate arrays is conceptually and technologically distinct from sending write data while sensing read data into a single array." Cypress RID Resp. at 32 (citing CX-428C Q/A 216-17). Thus, the record evidence supports the ALJ's finding that Respondents failed to establish by clear and convincing evidence that Hronik anticipates the asserted claims of the '477 patent.

b. Whether Hronik in Combination with Jiang Renders Claim 9 of the '477 Patent Obvious

Respondents argued that Hronik in combination with U.S. Patent No. 5,933,385 to Jiang et al. ("Jiang") renders claim 9 of the '477 patent obvious. RID at 24-25. The ALJ noted that claim 9 of the '477 patent depends from claim 8, and therefore includes each and every limitation of claim 8. The ALJ further noted Respondents' argument that the additional limitation recited in dependent claim 9 is obvious when Hronik is viewed in light of Jiang. *Id.* In other words, Respondents rely on Jiang to supply the additional limitations recited in claim 9. As discussed above, Respondents failed to present sufficient evidence to prove by clear and convincing evidence that Hronik discloses each limitation of claim 8, thus a combination of Hronik and Jiang cannot render claim 9 obvious. *Id.*

IV. CONCLUSION

Upon review of the ID and RID, the Commission affirms the ALJ's finding of no violation of section 337 with the modifications discussed above. Specifically, with respect to the '805 patent, the Commission affirms the following findings: (1) Cypress failed to prove that

the accused products infringe the asserted claims; (2) Cypress failed to establish the technical prong of the domestic industry requirement; and (3) Respondents failed to establish by clear and convincing evidence that the Osada or Ishida '041 references anticipate the asserted claims. The Commission reverses the ALJ's finding that the Ishida IEDM reference does not anticipate the asserted claims. Regarding the '134, '937, and '477 patents, the Commission affirms the following findings: (1) Cypress failed to prove that the accused products infringe the asserted claims; (2) Cypress failed to establish the technical prong of the domestic industry requirement; and (3) Respondents failed to establish by clear and convincing evidence that the cited prior art references anticipate the asserted claims.

By order of the Commission.

Lisa R. Barton
Acting Secretary to the Commission

Issued: June 28, 2013

CERTAIN STATIC RANDOM ACCESS MEMORIES AND PRODUCTS CONTAINING SAME **337-TA-792**

CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the following parties as indicated, on **June 28, 2013**.

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