PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

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

REMAND INITIAL DETERMINATION ON VALIDITY AND UNENFORCEABILITY

Chief Administrative Law Judge Charles E. Bullock

(February 25, 2013)

Appearances:

For Complainant Cypress Semiconductor Corporation

Arturo J. Gonzalez, Esq.; and Teresa Summers, Esq. of Morrison & Foerster LLP from San Francisco, CA

L. Scott Oliver, Esq. of Morrison & Foerster LLP from Palo Alto, CA

For Respondents GSI Technology, Inc., Avnet, Inc., and Cisco Systems, Inc.

Mark D. Fowler, Esq.; Alan A. Limbach, Esq.; Andrew P. Valentine, Esq.; Timothy Lohse, Esq.; Michael G. Schwartz, Esq.; and Eric R. Fuehrer, Esq. of DLA Piper LLP from East Palo Alto, CA

Gerald T. Sekimura, Esq.; and Saori Kaji, Esq. of DLA Piper LLP from San Francisco, CA

TABLE OF CONTENTS

I. BACKGROUND 1

II. RELEVANT LAW 1
A. Validity 1
1. Anticipation (35 U.S.C. § 102) 1
2. Obviousness (35 U.S.C. § 103) 3
B. Unenforceability 5
1. Inequitable Conduct 5

III. THE '134 PATENT 7
A. Validity 7
1. U.S. Patent No. 5,386,385 to Stephens 7
a) Claim 1 7
b) Claims 2, 12, 13, 14, and 15 11
2. U.S. Patent No. 5,268,865 to Takasugi 11
a) Claim 1 11
b) Claims 2, 12, 13, 14, and 15 13
3. [ ] 14
a) Claim 1 14
b) Claims 2, 12, 13, and 14 16
B. Conclusion 16

IV. THE '937 PATENT 17
A. Validity 17
1. Anticipation Under 35 U.S.C. § 102 17
a) U.S. Patent No. 5,973,989 to Pawlowski 17
(i) Claim 1 17
(ii) Claims 2, 6, and 13 19
b) U.S. Patent No. 5,717,653 to Suzuki 19
2. Obviousness Under 35 U.S.C. § 103 20
a) Pawlowski in Combination with Kumanoya or Sakaue 20
b) Suzuki in Combination with Kumanoya or Sakaue 20
3. Conclusion 21

V. THE '477 PATENT 21
A. Validity 21
1. Anticipation Under § 102(e) 21
a) U.S. Patent No. 5,933,385 to Jiang 21
b) U.S. Patent No. 7,069,406 to Hronik 22
2. Obviousness Under § 103 24
B. Unenforceability 26
1. Inequitable Conduct 26
a) Materiality 27
b) Intent to Deceive 30

VI. THE '805 PATENT 32
A. Validity 32
1. Ishida IEDM 32
a) Claim 1 32
b) Claims 2, 4, 5 and 6 37
2. U.S. Patent No. 6,667,649 to Osada 38
a) Claim 1 38
b) Claims 2, 4, 5 and 6 39
3. U.S. Patent No. 6,445,041 to Ishida 39
a) Claim 1 39
(i) "A memory cell comprising" 39
(ii) "substantially oblong active areas" 40
(iii) "each of the inner active regions of the series comprises a pair of source/drain regions for a respective p-transistor, and each of the outer active regions of the series comprises a pair of source/drain regions for a respective n-channel transistor" 40
(iv) Conclusion 44
b) Claims 2, 4, 5 and 6 44

VII. CONCLUSIONS OF LAW 45

VIII. REMAND INITIAL DETERMINATION 45

LIST OF ABBREVIATIONS

The following abbreviations may be used in this Initial Determination:

CDX	Complainant's demonstrative exhibit
CPX	Complainant's physical exhibit
CX	Complainant's exhibit
CIB	Complainant's initial post-hearing brief
CRB	Complainant's reply post-hearing brief
Dep.	Deposition
JX	Joint Exhibit
PHB	Pre-hearing brief
RDX	Respondents' demonstrative exhibit
RPX	Respondents' physical exhibit
RX	Respondents' exhibit
RIB	Respondents' initial post-hearing brief
RRB	Respondents' reply post-hearing brief
Tr.	Transcript

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

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

REMAND INITIAL DETERMINATION ON VALIDITY AND UNENFORCEABILITY

Chief Administrative Law Judge Charles E. Bullock

(February 25, 2012)

Pursuant to the Notice of Investigation, this is the Remand Initial Determination in the matter of Certain Static Random Access Memories and Products Containing Same, Investigation No. 337-TA-792.

For the reasons stated herein, the undersigned has determined that U.S. Patent Nos. 6,534,805, 6,651,134, 7,142,477, and 6,262,937 are valid. The undersigned has further determined that U.S. Patent No. 7,142,477 is enforceable.

I. BACKGROUND

On October 25, 2012, the undersigned issued an initial determination finding no violation of section 337 on the basis of noninfringement and the failure of Complainant to establish the existence of a domestic industry that practices the asserted patents. On December 21, 2012, the Commission determined to review the final initial determination in its entirety and remanded the Investigation for the undersigned to "(1) consider the parties' invalidity and unenforceability arguments and make appropriate findings and (2) issue a final initial remand determination ("RID") on these issues." *See* Comm'n Order: Remand of Investigation, Inv. No. 337-TA-792, at 3 (Dec. 21, 2012); *see also* Comm'n Notice, Inv. No. 337-TA-792, at 2 (Dec. 21, 2012).

II. RELEVANT LAW

A. Validity

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.

1. Anticipation (35 U.S.C. § 102)

A patent may be found invalid as anticipated under 35 U.S.C. § 102(a) if "the invention was known or used by others in this country, or patented or described in a printed publication in this country, or patented or described in a printed publication in a foreign country, before the

invention thereof by the applicant for patent." 35 U.S.C. § 102(a). A patent may be found invalid as anticipated under 35 U.S.C. § 102(b) if "the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b). Under 35 U.S.C. §102(e), a patent is invalid as anticipated if "the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent." 35 U.S.C. § 102(e). Anticipation is a question of fact that must be established by clear and convincing evidence. *Tessera, Inc. v. Int'l Trade Comm'n*, 646 F.3d 1357, 1366 (Fed. Cir. 2011) (citing *Sanofi-Synthelabo v. Apotex Inc.*, 550 F.3d 1075, 1082 (Fed. Cir. 2008)).

Under 35 U.S.C. § 102, a claim is anticipated and therefore invalid when "the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation." *Advanced Display Sys., Inc. v. Kent State Univ.,* 212 F.3d 1272, 1282 (Fed. Cir. 2000), *cert. denied*, 532 U.S. 904 (2001). A finding of inherent anticipation "is appropriate only when the reference discloses prior art that must *necessarily* include the unstated limitation." *King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1274 (Fed. Cir. 2010) (emphasis original). 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).

2. Obviousness (35 U.S.C. § 103)

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). Because obviousness is determined at the time of invention, rather than the date of application or litigation, "[t]he great challenge of the obviousness judgment is proceeding without any hint of hindsight." *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1375 (Fed. Cir. 2011) ("*Star II*").

When a patent is challenged as obvious, the critical inquiry in determining the differences between the claimed invention and the prior art is whether there is a reason to combine the prior art references. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417-418 (2007). In *KSR,* the Supreme Court rejected the Federal Circuit's rigid application of the teaching-suggestion-motivation test. *KSR,* 550 U.S. at 415. The Court stated that "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *Id.* at 418. The Court described a more flexible analysis:

> Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. . . . As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.

Id. The Federal Circuit has since held that when a patent is challenged as obvious, based on a combination of several prior art references, "the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so." *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007) (citations omitted). The reason to attempt "need not always be written references but may be found within the knowledge and creativity of ordinarily skilled artisans." *Ortho-McNeil Pharm., Inc. v. Mylan Lab., Inc.*, 520 F.3d 1358, 1365 (Fed. Cir. 2008).

Obviousness is a determination of law based on underlying determinations of fact. *Star II,* 655 F.3d at 1374. The factual determinations behind a finding of obviousness include: (1) the scope and content of the prior art, (2) the level and content of the prior art, (3) the differences between the claimed invention and the prior art, and (4) secondary considerations of non-obviousness. *KSR,* 550 U.S. at 399 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)). These factual determinations are referred to collectively as the "*Graham* factors." Secondary considerations of non-obviousness include commercial success, long felt but unresolved need, and the failure of others. *Id.* When present, secondary considerations "give light to the circumstances surrounding the origin of the subject matter sought to be patented," but they are not dispositive on the issue of obviousness. *Geo. M. Martin Co. v. Alliance Mach. Sys. Int'l.*, 618 F.3d 1294, 1304-06 (Fed. Cir. 2010). A court must consider all of the evidence from the *Graham* factors before reaching a decision on obviousness. For evidence of secondary considerations to be given substantial weight in the obviousness determination, its proponent must establish a nexus between the evidence and the merits of the claimed invention. *W. Union*

Co. v. MoneyGram Payment Sys. Inc., 626 F.3d 1361, 1372-73 (Fed. Cir. 2010) (citing *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995)).

B. Unenforceability

1. Inequitable Conduct

A patent is unenforceable on grounds of inequitable conduct if the patentee withheld material information from the PTO with intent to mislead or deceive the PTO into allowing the claims. *LaBounty Mfr. Inc. v. U.S. Int'l Trade Comm'n,* 958 F.2d 1066, 1070 (Fed. Cir. 1992). "The accused infringer must prove by clear and convincing evidence that the applicant knew of the reference, knew that it was material, and made a deliberate decision to withhold it." *Therasense v. Becton, Dickinson and Co.*, 649 F.3d 1276, 1290 (Fed. Cir. 2011). The Federal Circuit has emphasized that:

> [t]he need to strictly enforce the burden of proof and elevated standard of proof in the inequitable conduct context is paramount because the penalty to inequitable conduct is so severe . . . [j]ust as it is inequitable to permit a patentee who obtained his patent through deliberate misrepresentations or omissions of material information to enforce the patent against others, it is also inequitable to strike down an entire patent where the patentee only committed minor missteps or acted with minimal culpability or in good faith. As a result, courts must ensure than an accused infringer asserting inequitable conduct has met his burden on materiality and deceptive intent with clear and convincing evidence before exercising its discretion on whether to render a patent unenforceable.

Star Scientific, Inc., v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1366 (Fed. Cir. 2008).

Intent and materiality are separate requirements for a finding of inequitable conduct and "a court must weigh the evidence of intent to deceive independent of its analysis of materiality." *Therasense*, 649 F.3d at 1290. A strong showing for one requirement cannot compensate for deficiencies in the other requirement. *Id.* ("A district court should not use a 'sliding scale,'

where a weak showing of intent may be found sufficient based on a strong showing of materiality, and vice versa.").

Information that is withheld or misrepresented to the PTO is considered material if it satisfies a "but for" test:

> When an applicant fails to disclose prior art to the PTO, that prior art is but-for material if the PTO would not have allowed a claim had it been aware of the undisclosed prior art. Hence, in assessing the materiality of a withheld reference, the court must determine whether the PTO would have allowed the claim if it had been aware of the undisclosed reference. In making this patentability determination, the court should apply the preponderance of the evidence standard and give claims their broadest reasonable construction.

Id. at 1291-92. Previously, the definition of materiality had been tied to PTO Rule 56, found at 37 C.F.R. § 1.56, however, in *Therasense*, the Federal Circuit expressly disavowed that practice. *Id.* at 1293-94.

Although but-for materiality is required for a finding of inequitable conduct, there is an exception for cases of affirmative egregious misconduct. *Id.* at 1292. When a patentee has engaged in affirmative egregious misconduct—including but not limited to filing false affidavits—such conduct is considered per se material. *Id.* "Because neither mere nondisclosure of prior art references to the PTO nor failure to mention prior art references in an affidavit constitutes affirmative egregious misconduct, claims of inequitable conduct that are based on such omissions require proof of but-for materiality." *Id.* at 1292-93.

An inequitable conduct claim requires proof that the patentee acted with the specific intent to deceive the PTO. *Star Scientific,* 537 F.3d at 1366. A finding that a patentee was negligent or grossly negligent regarding an omission or misrepresentation to the PTO does not satisfy the intent requirement. *Therasense*, 649 F.3d at 1290. Specific intent to deceive can be inferred from indirect or circumstantial evidence; it cannot, however, be inferred from the

materiality of the omitted or misrepresented reference. *Id.* at 1290; *see also Larson Mfg. Co. of S.D., Inc. v. Aluminart Prods. Ltd.,* 559 F.3d 1317, 1340 (Fed. Cir. 2009). Additionally, the absence of a good faith explanation for withholding a material reference does not, by itself, prove intent to deceive. *Star Scientific*, 537 F.3d at 1368. To satisfy the clear and convincing evidence standard the specific intent to deceive must be "the single most reasonable inference able to be drawn from the evidence." *Therasense*, 649 F.3d at 1290 (citing *Star Scientific*, 537 F.3d at 1366). When there are multiple reasonable inferences that can be drawn as reasons for withholding a reference, deceptive intent cannot be found. *Id.* at 1290-91.

III. THE '134 PATENT

A. Validity

Respondents contend that the asserted claims of the '134 patent are invalid. (RIB at 46.) Specifically, Respondents contend that U.S. Patent No. 5,386,385 to Stephens, Jr. ("Stephens") and U.S. Patent No. 5,268,865 to Takasugi ("Takasugi") each anticipate claims 1-2 and 12-15, while a [ ] anticipates claims 1-2 and 12-14. (*Id.*) Cypress argues that Respondents have failed to carry their burden of establishing invalidity by clear and convincing evidence since each and every one of the references cited by Respondents is silent with respect to at least two claim elements – [1] whether address generation is non-interruptible; and [2] whether the address and/or control buses are freed up during address generation. (CIB at 40.)

1. U.S. Patent No. 5,386,385 to Stephens

a) Claim 1

Respondents contend that the testimony of their expert, Mr. Murphy, establishes the presence of each limitation of claim 1 in Stephens. (RIB at 47 (citing RX-354C at Q/A 346-357; RDX-73; RDX-74; RX-476).) Respondents claim that Cypress's only basis for

distinguishing Stephens from claim 1 is Stephens's use of a programmable mode register, which Respondents argue, fails for two reasons. (RIB at 47; RRB at 19.) First, Respondents assert that a mode register is a programmable circuit by which one can set a burst length and that such a programmable circuit is encompassed by independent claim 1 because dependent claim 5 (which depends upon claim 2, which in turn depends upon claim 1) claims a circuit "wherein said programmable burst length is programmable." (RIB at 47 (citing McAlexander, Tr. at 708:10-18, 709:207; JX-2 at 5:40-41).) Thus, according to Respondents, claim 1 encompasses a circuit that includes a mode register that is programmable to set a burst length. (RIB at 47 (citing McAlexander, Tr. at 709:8-13).) Second, Respondents argue that the evidence establishes that once the mode register in Stephens is programmed and a burst operation begins, a predetermined number of internal addresses will be generated and the generation of the addresses is not interrupted.[1] (RIB at 48 ("In this regard, the counters 48-54 disclosed in Stephens generate the internal address signals during a burst access and, although the burst length can be changed prior to 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."); RRB at 20.) In addition, Respondents maintain that Stephens discloses that address generation is non-interruptible. (RRB at 20 (citing RX-476 at 5:34-35, 8:44-46).)

Cypress asserts that Stephens fails to anticipate the claim elements "logic circuit configured to generate a predetermined number of said internal address signals" and "said generation of said predetermined number of said internal address signals is non-interruptible." (CIB at 42-43; CRB at 16-17.) Cypress argues that Stephens's method of address generation is

[1] Respondents claim that Mr. McAlexander – in his direct testimony – acknowledges that Stephens teaches "that the internal counter generates internal addresses until the burst length is reached" (CX-428C at Q/A 61), and that the burst length only may be changed "prior" to the burst command. (RIB at 48 (citing CX-428C at Q/A 57, 61).)

not predetermined due to its use of a mode register and the fact that the value in the mode register may change at any time.[2] (CIB at 43 ("In other words, the burst length can vary up to and including the very moment that a read or write command is given. That is not 'predetermined.'"); CRB at 16.) Cypress further argues that Stephens is silent as to whether address generation is non-interruptible. (CIB at 43; CRB at 16.) According to Cypress, none of the citations relied upon by Respondents to show that address generation in Stephens is non-interruptible addresses whether address generation may be interrupted. (CIB at 43.)

The undersigned finds that Respondents have failed to show by clear and convincing evidence that Stephens anticipates claim 1 of the '134 patent. Instead 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." (*See, e.g.*, RIB at 47-48 ("Although neither Complainant nor its expert, Mr. McAlexander, has contested the disclosure of the first limitation of claim 1 in Stephens . . ."; RRB at 19 ("Complainant does not dispute that Stephens discloses the first claim limitation.").) This reliance is inapposite. Cypress stated that Stephens does not anticipate the '134 patent "***at least*** because it does not disclose an address generation method that is non-interruptible or where the number of addresses to be generated is predetermined with a fixed burst length." (CIB at 42 (emphasis added).) Respondents seem to misinterpret this statement as Cypress stating that only one element is absent, which is incorrect. In fact, nowhere in the post-hearing briefing does Cypress ever state that any of the limitations of claim 1 are present in the prior art. (*See generally* CIB at 42-44.) As Cypress correctly notes, "it is not Cypress's burden to dispute every claim element; rather, it is

[2] According to Cypress, "Respondents concede that the burst length may be changed by changing the value stored in the mode register such that the generation of the burst is not predetermined as required by the claims." (CRB at 17.) Cypress claims that despite this concession, Respondents nevertheless contend that Stephens anticipates because during the burst operation, the burst length is fixed. (*Id.*) Cypress submits that "[w]hether the burst length is fixed during the burst operation is irrelevant to the '134 Patent" for the patent discloses a burst that is "***pre***-determined." (*Id.*)

Respondents' burden to show by clear and convincing evidence that each and every claim element is disclosed in the prior art reference." (CRB at 15 (emphasis original); *see also Linear Tech. Corp. v. Int'l Trade Comm'n*, 566 F.3d 1049, 1066 (Fed. Cir. 2009) (internal citations omitted) ("The burden is on the party asserting invalidity to prove it with facts supported by clear and convincing evidence.").) Moreover, much of Respondents' "proof" consists of conclusory statements with string cites to their expert's testimony. (*See, e.g.,* RIB at 47 ("The testimony of Respondents' expert, Mr. Murphy, establishes the presence of each limitation of claim 1 in Stephens. RX-354C, Q346-357 (Mr. Murphy's direct testimony); RDX-73 (Mr. Murphy's claim chart); RDX-74 (supporting demonstrative)"); 48 ("The timing and control circuit 28, column address buffer 44, adder 45, latch 56 and counters 48-54 of Stephens anticipate the second limitation of claim 1 ("a logic circuit …"). RX-354C, Q354-357; RX-476 at Figs. 2 and 9, Table 1, col. 5:6-35, col. 6:21-7:33, col. 8:36-52.").) This is, quite simply, nothing more than an improper attempt to circumvent the page limitations for post-hearing briefs. Merely 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.

Furthermore, Stephens is silent about whether the internal address generation is non-interruptible. (*See generally* RX-476; *see also* CIB at 43.) Respondents' expert, Mr. Murphy, concedes that Stephens is indeed silent as to whether address generation is non-interruptible. (RX-354C at Q/A 357 ("since the Stephens patent is silent about whether or not the internal address generation is non-interruptible").) While Mr. Murphy states that this silence demonstrates the internal address generation in Stephens "can be either interruptible or non-

interruptible," Mr. Murphy has absolutely no evidentiary support for such a statement. (RX-354C at Q/A 357.) In addition, the portions of Stephens cited by Respondents do not address whether address generation may be interrupted; rather, these citations "merely state that the burst outputs are on sequential clock cycles and that the internal counter generates internal addresses until the burst length is reached." (CX-428C at Q/A 61 (internal citations omitted).) Thus, the undersigned finds that Respondents have failed to carry their burden showing that Stephens discloses the "non-interruptible" limitation of claim 1 of the '134 patent.

Accordingly, claim 1 is not invalid as anticipated under §§ 102(a) or 102(b).

b) Claims 2, 12, 13, 14, and 15

Claims 2, 12, 13, 14, and 15 depend from claim 1. Because the undersigned has determined that claim 1 is not anticipated by Stephens, the undersigned also finds that claims 2, 12, 13, 14, and 15 are not anticipated by Stephens. *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) ("Because claim 3 is not inherently anticipated, dependent claims 4 and 5 also are not anticipated."); *see also Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987).

2. U.S. Patent No. 5,268,865 to Takasugi

a) Claim 1

Respondents submit that the testimony of their expert, Mr. Murphy, establishes the presence of each limitation of claim 1 in Takasugi.[3] (RIB at 51 (citing RX-354C at Q/A 324-338; RDX-75; RDX-76; RDX-77).) Respondents dispute Cypress's expert's contention that Takasugi does not disclose a device configured to generate a "predetermined" number of internal addresses where the generation of such addresses is "non-interruptible." (*Id.*)

[3] There appears to be no dispute that Takasugi is prior art to the '134 patent under 35 U.S.C. §§ 102(a) and 102(b) as the Takasugi patent issued on December 7, 1993, more than one year before the February 14, 2000 filing date of the '134 patent. (RIB at 51 (citing RX-354C at Q/A 327; McAlexander, Tr. at 701:25-702:17; RX-475; JX-2).)

Respondents argue that contrary to Mr. McAlexander's assertion (*i.e.*, if the CAS signal goes high, then address generation is interrupted), Figure 7 of Takasugi shows that when the CAS signal goes high, address generation continues. (RIB at 52 (citing RDX-77); RRB at 22.) Respondents claim that "[t]his is confirmed by Mr. Murphy's testimony." (RIB at 52 (citing RX-354C at Q/A 338).) Respondents also object to Cypress's argument that because the $\overline{CAS}$ signal can be changed at any time, the bursts sent from the party may be altered in length or halted mid-operation, arguing that this is nothing more than unsubstantiated attorney argument. (RRB at 22.)

Cypress submits that Takasugi does not anticipate the '134 patent at least because it does not disclose address generation where the burst length is predetermined, non-interruptible, and fixed. (CIB at 44; CRB at 17.) Specifically, Cypress argues that Takasugi is not anticipating prior art "because address generation in the Takasugi Patent is controlled by the /CAS signal." (CIB at 44.) Cypress claims that when $\overline{CAS}$ is set to zero, burst addresses are generated by incrementing an internal counter and when $\overline{CAS}$ is changed to one, address generation is interrupted and stops. (CIB at 44 (arguing that contrary to Respondents' assertion, a rising $\overline{CAS}$ does not allow address generation to continue uninterrupted); CRB at 17-18 ("That is, when /CAS is changed from zero to one, address generation is interrupted and necessarily either changes in length or stops.").) Because $\overline{CAS}$ and its associated address generation can be changed at any time, the bursts sent from the part may, Cypress argues, be altered in length or completely halted mid-operation and thus, the length of the burst is neither "predetermined" nor "non-interruptible." (CIB at 44-45; CRB at 17-18.)

The undersigned finds Respondents' arguments unpersuasive. First, Respondents' "discussion" of how Takasugi anticipates claim 1 of the '134 patent suffers from the same

flaws as their arguments pertaining to Stephens, namely that instead of clearly setting forth how each and every limitation of claim 1 is met by Takasugi, Respondents rely on Cypress's alleged failure to dispute every claim element, as well as conclusory statements incorporating by reference their expert's testimony, to prove anticipation. (*See, e.g.,* RIB at 51-53; RRB at 21-22.) As the undersigned previously noted, it is not Cypress's burden to disprove the existence of every claim element in the prior art; rather, it is Respondents' burden to show by clear and convincing evidence that each claim element is present in Takasugi. And, as also noted above, merely 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. Second, Respondents' expert 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). (*See* Murphy, Tr. at 583:11-25.) Thus, Respondents have not proven by clear and convincing evidence that Takasugi discloses the "non-interruptible" limitation of claim 1.

Accordingly, claim 1 is not invalid as anticipated under §§ 102(a) or 102(b).

b) Claims 2, 12, 13, 14, and 15

Claims 2, 12, 13, 14, and 15 depend from claim 1. Because the undersigned has determined that claim 1 is not anticipated by Takasugi, the undersigned also finds that claims 2, 12, 13, 14, and 15 are not anticipated by Takasugi. *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) ("Because claim 3 is not inherently anticipated,

dependent claims 4 and 5 also are not anticipated."); *see also Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987).

3. [ ]

a) Claim 1

Respondents contend that "the testimony of . . . Mr. Murphy[] establishes the presence of each limitation of claim 1 in [ ][4] (RIB at 56 (citing RX-354C at Q/A 463-381; RDX-79C; RDX-81; RDX-82; RDX-83).) Respondents claim that there is no distinction between [ ] and the '134 patent because both [ ] (RIB at 57; RRB at 23.) Respondents contend that [ ] the '134 patent, both circuits [ ] (RIB at 56-67.) Respondents therefore allege that Cypress's expert fails to draw "a patentable distinction between [ ] and claim 1." (*Id.*; RRB at 23.) Respondents assert that because Cypress does not deny that [ ] meets the remaining limitations of claim 1, [ ] renders claim 1 invalid. (RIB at 56.)

Cypress disputes that [ ] discloses "a logic circuit configured to generate a predetermined number of said internal addresses . . . wherein said generation of said predetermined number of internal address signals is non-interruptible." (CIB at 46.) Cypress asserts that the [ ] (*Id.* at 46-47; CRB at 19-20.) Cypress contends that the '134 patent's use of the ADV signal is fundamentally different than [ ] (CRB at 19-20 (citing CX-428C at Q/A 85; CDX-598; CDX599C; CDX-600C; Murphy, Tr. at 586:4-10).) Cypress argues that [ ]

[4] There appears to be no dispute that [ ] (RIB at 56 (citing RX-212 at GSI00351925; RX-354C at Q/A 364; JX-2).)

[ ] (*Id.*) Additionally, Cypress claims [

]does not anticipate claim 1 of the '134 patent. (*Id.*)

Rather than setting out in detail their argument demonstrating that [ ] anticipates the '134 patent, Respondents have incorporated by reference their expert's testimony and analysis from his witness statement by its string-cite to "RX-354C at Q/A 463-381, RDX-79C, RDX-81, RDX-82, RDX-83." (RIB at 56.) As discussed *supra*, this is nothing more than an improper attempt to circumvent the page limitations for post-hearing briefs. (*See* Section III.A.1.a.) Merely citing the testimony and demonstrative exhibits of a party's expert and incorporating that testimony/analysis by reference 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. Furthermore, Respondents cannot meet their burden of clear and convincing evidence by simply rebutting Cypress's validity analysis.

Notwithstanding Respondents' failure to present a detailed argument in their post-hearing brief, the evidence in the record demonstrates that [ ] does not disclose "a logic circuit configured to generate a predetermined number of said internal addresses . . . wherein said generation of said predetermined number of internal address signals is non-interruptible." (JX-2 at 5:26-31.) As an initial matter, the undersigned notes that a prior art reference does not anticipate a patent "simply by possessing identically named parts, unless these parts also have the same structure or otherwise satisfy the claim limitations." *Applied Med. Res. Corp. v. United States Surgical Corp.*, 147 F.3d 1374, 1380 (Fed. Cir. 1998). [ ]

[

] (CX-428C at Q/A 85-86.) As used in the '134 patent, the ADV signal generates fixed bursts. (*Id.* at Q/A 85.) [

] (*Id.* at Q/A 85.) [

]

Accordingly, claim 1 is not invalid as anticipated under §§ 102(a) or 102(b).

b) Claims 2, 12, 13, and 14

Claims 2, 12, 13, and 14 depend from claim 1. Because the undersigned has determined that claim 1 is not anticipated by [ ] the undersigned also finds that claims 2, 12, 13, and 14 are not anticipated by [ ] *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) ("Because claim 3 is not inherently anticipated, dependent claims 4 and 5 also are not anticipated."); *see also Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987).

B. Conclusion

For the reasons discussed above, the undersigned finds that Respondents have failed to prove, by clear and convincing evidence, that the prior art anticipates the asserted claims of the '134 patent.

IV. THE '937 PATENT

A. Validity

1. Anticipation Under 35 U.S.C. § 102

a) U.S. Patent No. 5,973,989 to Pawlowski

Respondents assert that U.S. Patent No. 5,973,989 to Pawlowski ("Pawlowski") anticipates claims 1, 2, 6, and 13 of the '937 patent.[5] (RIB at 80-81.)

(i) Claim 1

Respondents assert that "[e]xternal address bus 27 and clock signal CLK from clock 19 (in combination with output registers 34, output buffers 36, input registers 40, write drivers 44-49, write registers 88-91, and other circuits, that include complementary clock input terminals) of Pawlowski" anticipate the "address bus connected to said random access memory array . . ." limitation of claim 1. (RIB at 83 (citing RX-354C at Q/A 602-619; RX-493C at Q/A 52-54; RX-472 at Figs. 1-3 and 9, 1:18-23, 3:63-65, 4:7-23, 4:49-54, 9:7-30, 9:34-37, 9:39-41, 9:44-45, 9:61-67, 10:33-38, 10:44-49, 12:2-67).)

Cypress argues that Pawlowski discloses a command signal that operates on the rising edge of consecutive clock cycles, not on complementary edges of a single clock cycle or complementary edges of a differential clock cycle. (CIB at 89-90 (citing CX-436C at 4); CRB at 30.) According to Cypress, Figure 9 of Pawlowski "specifically shows that while data may be output at two words per clock cycle, the device can only register addresses and commands on the rising transitions of CLK." (CIB at 90.) This is consistent, Cypress argues, "with the control

[5] According to Respondents, Pawlowski qualifies as prior art under 35 U.S.C. § 102(e) because its filing date is August 22, 1997 while the earliest filing date of the '937 patent is March 13, 1998. (*Id.* at 81.) Complainants do not dispute this. (*See generally* CIB at 89-90; CRB at 29-31.) Because the filing date of Pawlowski is August 22, 1997 and the earliest priority date of the '937 patent is March 13, 1998, the undersigned finds that Pawlowski qualifies as 102(e) prior art. (*See* JX-4; RX-472.)

logic for the disclosed embodiment, which only contains logic that is triggered by the CLK signal–thus only registering inputs, including addresses, on the rising edge of the CLK signal." (CRB at 31 (citing RX-472 at Fig. 1; McAlexander, Tr. at 721:13-722:19).)

The undersigned finds Respondents' arguments unpersuasive. With respect to this limitation, Respondents fail to set forth clear and convincing evidence that Pawlowski discloses that a "periodic signal is configured to control data transfer operations." In fact, the extent of Respondents' discussion of this limitation boils down to the following sentence: "External address bus 27 and clock signal CLK from clock 19 (in combination with output registers 34, output buffers 36, input registers 40, write drivers 44-49, write registers 88-91, and other circuits, that include complementary clock input terminals) of Pawlowski anticipate the fourth limitation of claim 1." (*See* RIB at 83.) Nothing in that statement indicates that the periodic signal, presumably clock signal CLK, is configured to control data transfer operations. In fact, nothing in that statement discusses the idea of control at all. Thus, instead of setting out their argument regarding this limitation in detail, Respondents have merely incorporated by reference their expert's testimony and analysis from his witness statements. (*See* RIB at 83.) As previously noted, this is an improper attempt to circumvent the page limitations set by the undersigned for post-hearing briefs. (*See* Section III.A.1.a., *supra.*) In the undersigned's view, making a conclusory statement and simply providing a string cite to the testimony of a party's expert fails to constitute a discussion of the issue in the post-hearing brief as required by the Ground Rules and is insufficient to carry a party's burden of proof. Indeed, it is Respondents, and not Cypress, which carry the burden of proving anticipation by clear and convincing evidence.[6]

[6] Respondents emphasize that Cypress does not dispute that Pawlowski anticipates certain claim limitations. (*See, e.g.*, RIB at 81-83; RRB at 33-34.) That, however, is irrelevant when Respondents carry the burden of proving anticipation by clear and convincing evidence. *See Linear Tech. Corp. v. Int'l Trade Comm'n*, 566 F.3d 1049, 1066

The undersigned therefore finds that Respondents have failed to prove, by clear and convincing evidence, that Pawlowski teaches all of the limitations of claim 1. Accordingly, the undersigned finds that Pawlowski does not anticipate claim 1 of the '937 patent.

(ii) Claims 2, 6, and 13

Claims 2, 6, and 13 depend from independent claim 1. As the undersigned has already ruled above that Respondents have failed to show, by clear and convincing evidence, that each and every limitation of claim 1 of the '937 patent is anticipated by Pawlowski, the undersigned also finds that Respondents have failed to show, by clear and convincing evidence, that the additional limitations in claims 2, 6, and 13 are anticipated by Pawlowski. *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) ("Because claim 3 is not inherently anticipated, dependent claims 4 and 5 also are not anticipated."); *see also Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987).

b) U.S. Patent No. 5,717,653 to Suzuki

With respect to U.S. Patent No. 5,717,653 to Suzuki ("Suzuki"), Respondents contend that "if the Chief ALJ were to adopt Complainant's infringement theory (which the Chief ALJ should not), then claims 1-2 and 12-13 of the '937 patent also are invalidated by Suzuki." (RIB at 80-81.) In the Initial Determination, the undersigned did not adopt Cypress's infringement theory regarding the '937 patent and found that the '937 patent was not infringed by Respondents' accused products. *Certain Static Random Access Memories and Prods. Containing the Same*, Inv. No. 337-TA-792, Int. Det. at 33-40 (Oct. 25, 2012). Accordingly, the undersigned finds that Suzuki does not anticipate claims 1-2 and 12-13 of the '937 patent.

(Fed. Cir. 2009) (internal citations omitted) ("The burden is on the parting asserting invalidity to prove it with facts supported by clear and convincing evidence.").

2. Obviousness Under 35 U.S.C. § 103

a) Pawlowski in Combination with Kumanoya or Sakaue

Respondents assert that Pawlowski in combination with U.S. Patent No. 4,954,922 ("Kumanoya") or U.S. Patent No. 5,276,837 ("Sakaue") renders claim 12 of the '937 patent obvious. Claim 12 depends from claim 1 and adds the limitation "wherein each of said data input bus and said data output bus is unidirectional." (JX-4 at 14:1-3.) Respondents argue that Kumanoya and Sakaue "each disclose the additional limitation of claim 12." (RIB at 85.) However, the undersigned has already ruled above that Pawlowski does not anticipate claim 1 of the '937 patent and Respondents have not presented any arguments that Kumanoya or Sakaue cure the deficiencies of Pawlowski with respect to claim 1. Therefore, because the Pawlowski, Kumanoya, and/or Sakaue combination does not meet all of the limitations of independent claim 1, the undersigned finds that 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.

b) Suzuki in Combination with Kumanoya or Sakaue

Respondents asserts that Suzuki in combination with Kumanoya or Sakaue renders claim 12 of the '937 patent obvious. Similar to above, Respondents argue that Kumanoya and Sakaue "each disclose the additional claim limitation of claim 12." (RIB at 94.) However, the undersigned has already ruled above that Suzuki does not anticipate claim 1 of the '937 patent and Respondents have not presented any arguments that Kumanoya or Sakaue cure the deficiencies of Suzuki with respect to claim 1. Therefore, because the Suzuki, Kumanoya, and/or Sakaue combination does not meet all of the limitations of independent claim 1, the undersigned finds that Respondents have failed to show, by clear and convincing evidence, that

the additional limitations in claim 12 are rendered obvious by the combination of Suzuki, Kumanoya, and/or Sakaue.

3. Conclusion

For the reasons discussed above, the undersigned finds that Respondents have failed to prove, by clear and convincing evidence, that the prior art anticipates, or renders obvious, the asserted claims of the '937 patent.

V. THE '477 PATENT

A. Validity

1. Anticipation Under § 102(e)

a) U.S. Patent No. 5,933,385 to Jiang

Respondents contend that U.S. Patent No. 5,933,385 to Jiang ("Jiang") anticipates claims 8 and 9 of the '477 patent under § 102(e).[7] Respondents' anticipation argument as to Jiang is conditional, however, and only applies if the undersigned adopts Cypress's infringement analysis (*i.e.,* if the undersigned finds that timing diagrams are sufficient to establish the practice of the asserted claims). (RIB at 125-126.) In the Initial Determination, the undersigned found that the timing diagrams, by themselves, did not constitute adequate proof of an overlap between the sensing of read data and the sending of write data. *See Certain Static Random Access Memories and Prods. Containing Same*, Inv. No. 337-792, Int. Det. at 51-52 (timing diagrams "do[] not show when read data is sensed, but rather show[] a range over which the entire read operation is performed"). Accordingly, because the undersigned did not adopt Cypress's infringement analysis, Respondents' conditional argument as to the anticipation of claims 8 and 9 of the '477 patent by Jiang does not apply.

[7] The Jiang patent is entitled "System And Method For A Flexible Memory Controller." (RX-218.) It was filed July 31, 1997 and issued August 3, 1999. (*Id.*)

b) U.S. Patent No. 7,069,406 to Hronik

Respondents assert that U.S. Patent No. 7,069,406 to Hronik ("Hronik") anticipates claim 8 of the '477 patent under § 102(e).[8] (RIB at 121.) According to Respondents, Cypress does not contest that the first (*i.e.*, "storing upon an input to a multiplexer a write address sent over a write address path") and second (*i.e.,* "sending upon another input to the multiplexer a read address sent over a read address path in parallel with the write address path") limitations of claim 8 are disclosed by Hronik.[9] (*Id.* at 123 (citing RX-354C at Q/A 241-247; RX-468 at 4:32-54, 6:23-40, 7:21-33, Fig. 1).) Respondents argue that Hronik has inherent sense amplifiers and a read path, thereby anticipating the third limitation (*i.e.,* "sensing read data from the array of storage elements sent across a read data path read data accessed by the read address") of claim 8. (*Id.* (citing RX-354C at Q/A 248-254; RX-468 at 5:14-53).) Additionally, Respondents contend that Hronik's disclosure of "[t]he write data path from the Data pin to the Din data-in bus for each memory block" anticipates the fourth limitation of claim 8 (*i.e.,* "while sensing read data, sending write data across a write data path to be written to the array at the write address"). (*Id.* (citing RX-468 at 5:14-53, 7:15-21, 8:36-42, 9:32-35).)

Respondents insist that Cypress's arguments against anticipation are mistakenly premised on the assertion that Hronik's two memory blocks are two separate memory arrays, rather than the single memory array claimed in the '477 patent.[10] (*Id.* at 121-22.) According to Respondents, Cypress's reading of the claim is improperly narrow because claim 8 actually recites "an array of storage elements." (*Id.* at 122 (citing JX-3 at 10:20, 28).) Because

---

[8] The Hronik patent is entitled "Double Data Rate Synchronous SRAM With 100% Bus Utilization." (RX-468.) Hronik was filed on July 2, 1999 before the June 18, 2004 filing date of the '477 patent. (RX-468; JX-3)

[9] Respondents' Post-Trial Brief repeatedly refers to the limitations of "claim 1" being disclosed by Hronik while quoting the language of claim 8. The undersigned assumes this was a typographical error.

[10] Respondents claim that Cypress offers no other arguments against Hronik's disclosure of this claim limitation. Respondents contend that Cypress's expert admitted that the read access and write access disclosed in Hronik overlap. (RIB at 122 (citing CX-428C at Q/A 43).)

"[m]emory blocks 20 and 30 are storage elements," Respondents contend that "together [they] comprise an array of storage elements." (*Id.*; RRB at 60 ("there is no basis to limit the claimed 'an array of storage elements' to the use of only one bank of memory").)

Cypress disputes that Hronik anticipates claim 8 of the '477 patent, arguing that Hronik fails to disclose the limitation "while sensing read data, sending write data across a write data path to be written to the array at the write address." (CIB at 128.) Cypress claims that the '477 patent "explicitly requires sensing and sending to '**the** array of storage elements'—**one** array of storage elements." (CIB at 129 (emphasis in the original).) According to Cypress, Hronik, in contrast to the '477 patent, discloses two independent RAM blocks, which constitute two arrays of storage elements. (CIB at 128; CRB at 52-53 ("From the perspective of one of ordinary skill in the art, the interleaving of data from two separate arrays is conceptually distinct from sending write data while sensing read data into a single array.").) Cypress further argues that neither of the separate, independent arrays of Hronik teaches how to execute the claimed overlap of the sensing of read data and sending of write data. (CIB at 129.)

The undersigned finds that Respondents have not provided clear and convincing evidence that Hronik anticipates claim 8 of the '477 patent. Despite 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.[11] (*See* RIB at 121-23; RRB at 60.) In fact, Respondents only devote five sentences to advancing their anticipation argument. (*See* RIB at 123.) Each of these sentences is simply a conclusory assertion that the individual limitations of claim 8 are met. (*Id.*) There is absolutely no discussion of how the

[11] Respondents also emphasize the fact that Cypress has not contested that certain limitations of claim 8 are disclosed in Hronik. (RIB at 121, 123; RRB at 60 ("Complainant does not dispute in its Post-Trial Brief that the first three limitations of claim 8 are disclosed by Hronik.").) The fact that Cypress has not challenged the presence of every claim element does not relieve Respondents of their burden to show by clear and convincing evidence that each claim element is disclosed in the prior art reference.

structure described in Hronik discloses each and every limitation of the claimed method, as Respondents have merely incorporated by reference their expert's testimony and analysis from his witness statement. For example, as proof that the "sensing read data from the array of storage elements sent across a read data path read data accessed by the read address" is inherently anticipated by Hronik, Respondents merely state that "[t]he read path from the Dout output of each memory block passing through multiplexer 120 to the output buffer 130 and the inherent sense amplifiers of Hronik anticipate the third limitation of claim [8]."[12] (*Id.*) Such 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. (*See* Section III.A.1.a., *supra.*)

Accordingly, the undersigned finds that claim 8 of the '477 patent is not invalid as anticipated by Hronik.

2. Obviousness Under § 103

Respondents assert that Hronik in combination with Jiang renders claim 9 of the '477 patent obvious under § 103. Respondents contend that Jiang discloses two registers in the write address path that store the write address before it progresses to an address multiplexer. (RIB at 124.) In Respondents' view, the register closest to the multiplexer ("AReg2") satisfies the additional limitation of claim 9 because "when the write address is available at the output of the AReg2 register, it is held by the AReg2 register." (*Id.*) Respondents argue that "[a] person of

[12] The other limitations of claim 8 of the'477 patent are addressed in a similar manner. Respondents state that "[t]he write address path from the address bus 201 to register 110 and multiplexer 80 of Hronik anticipate the first limitation of claim [8];" "[t]he read address path from address bus 201 to input 81 of multiplexer 80 of Hronik anticipate the second limitation of claim [8];"and "[t]he write data path from the Data pin to the Din data-in bus for each memory block, and its operation, of Hronik anticipate the fourth limitation of claim [8]." (RIB at 123.)

ordinary skill would have found it obvious to implement Hronik's late write memory with a set of registers (that satisfies the storing in a set of registers element) that holds the write address (that satisfies the holding the write address stored element) and it would have been an obvious modification of Hronik that would have yielded predictable results of a late write memory with a deeper write address pipeline that allows the device to store more than one write address." (*Id.* at 124-125 (further arguing that deeper write address pipelines were well known in the art and modification was predictable because a deeper pipeline affords more flexibility and can store multiple write addresses) (citing RX-493C at Q/A 33).)

Cypress disputes that the combination of Jiang and Hronik renders claim 9 obvious. (CRB at 54.) Cypress argues that neither reference discloses sensing read data concurrently or partially concurrently with sending write data and further argues that combining Jiang and Hronik would not cure that deficiency. (CRB at 54.) In Cypress's view, integrating features from Jiang and Hronik would be both difficult and costly, factors which Cypress asserts negate any motivation to combine the references. (*Id.* at 55.)

The undersigned finds that Respondents have not proven by clear and convincing evidence that the combination of Hronik and Jiang renders claim 9 of the '477 patent invalid as obvious. Claim 9 of the '477 patent depends from claim 8, and therefore includes each and every limitation of claim 8. (*See* RIB at 124 (explaining that claim 9 limits the "storing" described in claim 8 to "holding the write address held within a set of registers") (quoting JX-3 at 10:34-36); *see also* Order No. 29 at 26-27 (Feb. 9, 2012).) The only obviousness argument advanced by Respondents is that the additional limitation of claim 9 is obvious when Hronik is viewed in light of Jiang. As discussed above in Section V.A.1(b), Respondents have not provided sufficient proof that the limitations of claim 8 are present in Hronik. Additionally,

Respondents have not argued that the limitations of claim 8 are rendered obvious by Hronik. Accordingly, because dependent claim 9 includes all the limitations of independent claim 8, and Respondents have not provided sufficient proof that the limitations of claim 8 are invalid as anticipated or obvious, the undersigned finds that claim 9 of the '477 patent is not obvious in view of Hronik and Jiang.

B. Unenforceability

1. Inequitable Conduct

Respondents contend that the '477 patent is unenforceable due to inequitable conduct because Cypress failed to disclose material prior art during prosecution. (RIB at 129-137.) Respondents allege that the inventors of the '477 patent invented a similar SRAM when they [ ][13] (RIB at 130 (further submitting that this [ ]).) Although the inventors of the '477 patent presented the [ ] Respondents argue that [ ] (RIB at 129-135; RX-462C at CYGSITC00002405-CYGSITC00002406.) Rather, Respondents assert that the [ ] was disclosed as an embodiment of the claimed invention and is covered by claim 1 of the '477 patent. (RIB at 131-133.) Respondents maintain that Figs. 2 and 3 of the '477 patent are identical to the figures depicting the prior art [ ] (*Id.* (citing JX-116C at 92:24-93:1; JX-130C at 142:17-143:8; RX-462C).)

[13] Respondents refer to the prior art SRAM as [ ] while Cypress refers to it as [ ] The undersigned will refer to the prior art SRAM as the [ ]

Cypress argues that there is not sufficient evidence of the materiality of the [ ] because there are significant differences between the [ ] and the '477 patent. (CIB at 56.) Cypress contends that the [ ] was immaterial to the patentability of the claims of the '477 patent and it would therefore be improper to infer deceptive intent from its omission. (*Id.* at 58.)

a) Materiality

Respondents argue that Cypress's failure to disclose the [ ] to the PTO satisfies the "but-for" materiality requirement under *Therasense* because the disclosure of the [ ] would have resulted in the rejection of at least claim 1 of the '477 patent. (RIB at 135 (arguing that the [ ] In support, Respondents note that their expert, Mr. Murphy, has confirmed that each limitation of claim 1 is found in the [ ] (RIB at 133 (citing RX-354C at Q/A 115, 124-140).) Respondents also contend that two of the inventors of the '477 patent, [ ] (*Id.* at 135 (citing JX-116C at 74:24-75:13; JX-119C at 102:19-103:5).)

Cypress insists that the [ ] does not anticipate claim 1 of the '477 patent because the [ ] (CIB at 134-35 [ ] Cypress contends that the [ ] (*Id.*)

The undersigned finds that Respondents have not proven by clear and convincing evidence that the [ ] was material to the patentability of claim 1 of the '477 patent. *See Therasense*, 649 F.3d at 1291 (information is material if the PTO would not have

allowed the claim but for the nondisclosure or misrepresentation). [

] Respondents do not explain how the [ ] anticipates each element of claim 1. (*See* JX-116C at 92:15-18 [

] JX-117C at 55:13-16 [

] JX-119C at 100:5-7, 117:17-118:6 [

] Instead, Respondents make the following unsupported assertions:

- "[C]laim 1 claims the prior art [ ] (RIB at 133.)
- "Mr Daffer drafted an extremely broad claim 1 of the '477 patent, a claim that covers the [ ] shown in Figures 2 and 3, the system that was known prior art." (*Id.*)
- "[A]s the Examiner had no knowledge of the [ ] he allowed claim 1 even though it claims the prior art." (*Id.* at 134.)
- "[C]laim 1 of the '477 patent represents the [ ] (*Id.* at 135.)
- "[T]he [ ] embodiment described in the specification, should have been disclosed to the PTO because they establish both anticipation and the on-sale bar." (*Id.*)

In the rare instances when the Respondents actually cite to the record, the evidence they identify is far from clear and convincing. *See Star Scientific,* 537 F.3d at 1366 ("courts must ensure that an accused infringer asserting inequitable conduct has met his burden on materiality and deceptive intent with clear and convincing evidence before exercising its discretion on whether to render a patent unenforceable"). For example, Respondents assert that [

] is prior art that, had it been disclosed to the PTO, would have resulted in the rejection of at least claim 1 of the '477 patent as unpatentable" and in support, [

] (*See* RIB at 135 (citing JX-116C at 74:24-75:13; JX-119C at 102:19-103:5; JX-130C at 156:2-12).) These three pieces of evidence are the only evidence cited in the section of

Respondents' brief addressing the materiality requirement of *Therasense* and do not prove that the [ ] ***anticipates*** claim 1 of the '477 patent.[14] (*See* RIB at 135-36.) The [

] (*See* JX-116C at 74:24-75:13 [

] JX-119C at 102:19-103:5 [

] JX-130C at 156:2-12 [

] Because Respondents have wholly failed to explain their position that claim 1 of the '477 patent would not have issued had the examiner been made aware of the prior art [ ] the undersigned finds that Respondents have not carried their burden of proving materiality by clear and convincing evidence. Having failed to prove the materiality of the [ ] by clear and convincing evidence, Respondents cannot, as a matter of law, prevail on their inequitable conduct allegation. *See Therasense*, 649 F.3d at 1290 ("The accused infringer must prove by clear and convincing evidence that the applicant knew of the reference, knew that it was material, and made a deliberate decision to withhold it.")

---

[14] In their discussion of the factual basis for their inequitable conduct allegations, Respondents assert that "Respondents' expert, Mr. Murphy, confirms that Figure 2 of the '477 patent and its corresponding description in the specification [ ] (RIB at 133 (citing RX-354C at Q/A 115, 124-140).) Respondents do not further discuss the significance of Mr. Murphy's testimony or explain how the [ ] anticipates each and every limitation of claim 1. In addition, Respondents argue that during prosecution Mr. Daffer overcame a rejection of claim 1 by [ ] (RIB at 134 (citing JX-7 at CYGSITC00026300-26302.) In the Response to the Office Action cited by Respondents, however, Mr. Daffer discusses [

]

b) Intent to Deceive

Respondents argue that deceptive intent is the single most reasonable inference that can be drawn from Cypress's failure to disclose the [ ] during the prosecution of the '477 patent. (RIB at 137.) Specifically, Respondents rely on (1) the prosecuting attorney, Mr. Daffer's failure to disclose the [ ] as prior art in the specification or during prosecution, despite possessing materials that clearly indicated it was prior art; (2) the inventors failure to correct the specification, drawings, or claims that misrepresented the scope of the invention; (3) the inventors failure to disclose known prior art [

] (4) Cypress and the inventors failure to correct misrepresentations made throughout prosecution notwithstanding [

] and (5) the complete concealment of the [ ] from the patent examiner despite the fact that [

] (*Id.* at 136-37.)

Cypress contends that Respondents failed to prove the intent prong of the inequitable conduct analysis because they have not provided any evidence that the patentees made the deliberate decision to withhold a material reference. (CIB at 135.) According to Respondents the evidence offered by Cypress consists of "repetitive re-statements that the prosecuting attorney and inventors did not disclose the [ ] to the PTO." (CRB at 58.) Cypress asserts that given the significant differences between the [ ] and the '477 patent, one can reasonably infer that the device was withheld not to deceive the PTO, but because it was immaterial to the patentability of the claims of the '477 patent. (*Id.* at 56.)

The undersigned finds that Respondents have not proven by clear and convincing evidence that Cypress, in failing to disclose the [ ] acted with the specific intent to deceive the PTO.[15] In the portion of Respondents' brief addressing the deceptive intent, Respondents ***cite to only a single piece of evidence***, an excerpt of [ ] *See* RIB at 136-137 (citing JX-130C at 158:8-15); RRB at 63-64 (citing no evidence).) Therein, [

] *Therasense*, 649 F.3d at 1290.

Accordingly, because Respondents have not proven by clear and convincing evidence that the [ ] was material to the patentability of the '477 patent, or that Cypress withheld the [ ] with the specific intent to deceive the PTO, the undersigned finds that the '477 patent is not unenforceable due to inequitable conduct.

[15] Respondents argue that Cypress waived any arguments related to a lack of deceptive intent under the undersigned's ground rules because Cypress did not include the issue in its Pre-Trial Brief. (RIB at 137 (citing Ground Rules 8.2 and 11.1); RRB at 63-64.) Contrary to Respondents' assertion, the undersigned's ground rules do not relieve Respondents of the burden of proving, by clear and convincing evidence, that Cypress had the specific intent to deceive the PTO. Indeed, the Federal Circuit has stated that "a patentee need not offer any good faith explanation for his conduct ***unless and until*** an accused infringer has met his burden to prove an intent to deceive by clear and convincing evidence." *1st Media*, 694 F.3d at 1373 (emphasis added).

VI. THE '805 PATENT

A. Validity

1. Ishida IEDM

a) Claim 1

Respondents argue 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. Respondents state that their position is supported by, among other things, the unrebutted testimony of Respondents' expert, Professor Gosney, which establishes the presence of each limitation of claim 1 in the "Type-4 cell" of Ishida IEDM. (RIB at 148.) In addition, Respondents state that the invalidity of claim 1 was confirmed during the hearing by the cross-examination of Cypress's expert, Mr. McAlexander. (*Id.* (citing Mr. McAlexander, Tr. 648:22-649:6, 651:25-652:2, 654:6-655:8, 656:13-657:11).)

Respondents state that because the four rectangular active regions of the Type-4 cell meet the expressly-stated requirements of a "substantially oblong active region" under Order No. 29's claim construction, the only issue is whether Cypress should be permitted to inject an additional "no rectangle" limitation into Order No. 29's existing claim construction. Respondents assert that the answer to that question is "no." (*Id.* at 148-149.)

Respondents argue that Order No. 29 has already construed "substantially oblong active regions" and that construction encompasses rectangular active regions. Respondents state that the cell shapes permitted by alternative criteria (1) and (3) of Order No. 29's claim construction encompass triangles, and that Cypress does not argue otherwise. (*Id.* at 149 (citing Order No. 29 at 7-8).) More specifically, Respondents assert that, under alternative criteria (1) of Order No.

29's claim construction, a rectangle may have (and in the case of the active regions of the Type-4 cell, does have) a length that is "substantially constant" (the length of the rectangle is constant) and has a width that "varies by approximately one-third or less" (the width of a triangle does not vary, and therefore varies by "one-third or less"). (*Id.* at 149 (citing Order No. 29 at 7-8; RX-353.1 at Q/A 129; RDX-3).) In addition, Respondents argue that under alternative criteria (3) a rectangle may have (and, in the case of the active regions of the Type-4 cell, does have) a length "which is greater than or equal to approximately three times its maximum width." (*Id.*) Thus, Respondents state that the four rectangular active regions of Ishida IEDM meet the express requirements of Order No. 29's claim construction. (*Id.* at 149.) Respondents also assert that all parties are bound by the claim construction set forth in Order No. 29. (*Id.* at 149-150.)

Respondents oppose Cypress's argument that the undersigned should disregard the shape of the Type-4 cell depicted in Ishida on the ground that Ishida IEDM is somehow silent as to the proportions of their respective active regions. In response to that argument, Respondents state that Ishida provides a drawing of the Type-4 cell which shows the relative proportions of length and width of each active region. (RRB at 68 (citing RX-464 at GSI00000366).) Respondents state that these proportions are recognized as accurate to one of skill in the art. (*Id.* at 68-69 (citing RX-353.1 at Q/A 130-134).) Respondents argue that, while Cypress states that the undersigned should simply disregard these drawings, neither Cypress nor its expert "actually affirmatively assert[s] that they believe that the proportions of the drawings are incorrect, nor do they offer any reason to suspect that they are incorrect." (*Id.* at 68-69.)

Respondents also oppose Cypress's assertion that the specification distinguishes oblong shapes from rectangular shapes. As support, Respondents cite the following language from the specification: "in the embodiment of FIG. 2, the active regions are substantially oblong, and in

some cases may be substantially rectangular as well." (*Id.* at 70 (citing JX-1 at 6:65-67).) In addition, Respondents oppose Cypress's argument that a rectangular region would be unstable based upon Cypress's assertion that any active region with a "beta region" of 1 would be unstable. As support, Respondents cite to Dr. Gosney's testimony that there are many ways to achieve cell stability. (*Id.* at 71 (citing RX-353.1 at Q/A 139-145).) In any event, Respondents assert, no asserted claim recites a beta ratio. (RRB at 71 (citing JX-1).)

Cypress asserts that Ishida IEDM does not anticipate claim 1 of the '805 patent because that reference fails to disclose rectangular active regions. Cypress states that the Ishida IEDM discloses several static random access memory (SRAM) cell layouts that afford different minimum cell sizes and bit line capacitance. Cypress asserts that Ishida IEDM fails to disclose "a series of four substantially oblong regions formed within a semiconductor substrate and arranged side-by-side with long axes substantially parallel," as claimed in claim 1 of the '805 patent. (CIB at 155.)

Cypress argues that Respondents' references to the size of the active regions disclosed in the figures of Ishida IEDM are improper because 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. Thus, Cypress asserts that Respondents' reliance on Ishida IEDM's figures is misguided and the emphasis on those diagrams for sizing proportions cannot rise to the level of "clear and convincing." In addition, Cypress states that, notwithstanding those problems, Ishida IEDM only discloses parallel rectangular, not substantially oblong, active regions as claimed by claim 1 of the '805 patent. (*Id.* at 155-156.) Cypress states that Respondents' position is contrary to the invention of the '805 patent, which requires a substantially oblong active region. (*Id.* at 156 (citing CX-428 at Q/A 145, 146).) Cypress argues that, in contrast to

the active regions disclosed in the specification of the '805 patent, purely rectangular active regions are unstable. Cypress claims that substantially oblong regions allow for wider latch transistors and narrower pass transistors in the outer active regions, improving the beta ratio described in the specification. Cypress argues that the relative sizing of the transistors restricts current from pass transistors, which helps prevent the stored value of the latch transistors from changing during "Read" operations. Cypress asserts that the importance of maintaining the stored value during the "Read" operations is especially important in smaller cell geometries. (*Id.*)

Cypress argues that while Order No. 29 has already construed "substantially oblong active region," the parties, including their respective experts, must still apply that construction in a manner that is consistent with the specification. (CRB at 67 (citing *General Surgical Innovations, Inc. v. Origin Medsystems, Inc.*, 250 F. 3d 761 (Table), 2000 WL 959507 (C.A. Fed.) (unpublished)).) Cypress also asserts that the '805 patent's use of "substantially oblong," rather than "rectangular" structures, particularly "substantially oblong" active regions, was a deliberate choice made to improve the performance of the memory device. (*Id.* at 67 (citing CX-428 at Q/A 13; JX-1 at 7:15-20 (setting beta ration at 1.5.)).) Cypress argues that the beta ratio cannot be equal to or slightly greater than the width of the access transistor, which results in an active region that is not rectangular. (*Id.* at 67-68.)

Cypress argues that claims are presumed to be used consistently throughout the patent. Therefore, Cypress asserts that because the specification specifically distinguishes "substantially oblong" from "rectangular," the terms cannot have the same meaning. (*Id.* at 68 (citing JX-1 at 6:65-67).) Therefore, Cypress argues that because "rectangular" is not "substantially oblong," Ishida IEDM does not anticipate the '805 patent because it discloses only rectangular active

regions, a point that Cypress states is not disputed by Respondents, rather than "substantially oblong active regions." (*Id.* at 68.)

In Order No. 29, the undersigned construed the 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***."

(Order No. 29 at 7-8.)

As set forth above, Respondents rely, in part, on the following testimony of Dr. Gosney:

> [t]he four horizontally-oriented rectangular-shaped regions with black fill of the Type-4 cell in Table 1, p. 203, of Ishida IEDM 1998 (RX-464) meet all of the first three alternative criteria, and the fourth criteria, which is an exclusion criteria, of Respondents' proposed construction.
>
> This is because, as rectangular regions, the active regions of the "Type-4 cell" active regions has no variation in their width, and therefore varies by 1/3 or less along their length. This satisfies criteria (1).
>
> The widths of active regions for the access and latch transistors are the same, therefore the width of the active regions varies only by the widths of the access and latch transistors. This satisfies criteria (2).
>
> As illustrated in RDX-3, the length of the active regions is greater than or equal to three times their maximum width. This satisfies criteria (3).
>
> Further, as rectangular in shape, the active regions are not "L-shaped." This satisfies criteria (4).

(RX- 353.1 at Q/A 129.)

Respondents assert that Dr. Gosney's testimony, as one of ordinary skill in the art, is adequate to support the fact that the components represented by the diagrams in Ishida IEDM discussed in Dr. Gosney's testimony are drawn to scale, and that the length and width of those components have the relationship portrayed in those diagrams. However, there is nothing in Ishida IEDM itself that supports that part of the testimony of Dr. Gosney cited above as to the relationship of the length and width of the diagrams discussed in the claim construction from Order No. 29.

"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." *Hockerson-Halberstadt, Inc. v. Avia Grp. Int'l*, 222 F.3d 951, 956 (Fed. Cir. 2000) (internal citations omitted); *see also Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1268 (Fed. Cir. 2012) (internal citations omitted) (cautioning against overreliance on drawings that are neither expressly to scale nor linked to quantitative values in the specification); *In re Wright*, 569 F.2d 1124, 1127 (C.C.P.A. 1977) ("Absent any written description in the specification of quantitative values, arguments based on measurement of a drawing are of little value."). The undersigned finds that this rationale is equally applicable to publications such as Ishida IEDM.

Accordingly, the undersigned finds that Respondents have not shown by clear and convincing evidence that Ishida IEDM anticipates claim 1 of the '805 patent.

b) Claims 2, 4, 5 and 6

Claims 2, 4, 5 and 6 of the '805 patent depend from claim 1. Because the undersigned has determined that claim 1 is not anticipated by Ishida IEDM , the undersigned also finds that claims 2, 4, 5, and 6 of the '805 patent are not anticipated by Ishida IEDM. *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) ("Because claim 3 is not

inherently anticipated, dependent claims 4 and 5 also are not anticipated."); *see also Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987).

2. U.S. Patent No. 6,667,649 to Osada

a) Claim 1

Respondents argue that Embodiments 3 and 4 of U.S. Patent No. 6,667,649 ("Osada") anticipate claim 1 of the '805 patent. Respondents state that this contention is supported by Osada, the testimony of Respondents' expert, Dr. Gosney, as well as the testimony of Cypress's expert, Mr. McAlexander. (RIB at 154.) Cypress opposes Respondents' arguments.

The 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. Like Ishida IEDM, there is nothing in Osada stating what the relationship is between the length and width of the diagrams set forth in Embodiments 3 and 4. 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. As noted above, "[i]t 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." *Hockerson-Halberstadt, Inc. v. Avia Grp. Int'l*, 222 F.3d 951, 956 (Fed. Cir. 2000) (internal citations omitted). Therefore, the undersigned finds that Respondents have failed to show by clear and convincing evidence that Osada anticipates claim 1 of the '805 patent.

b) Claims 2, 4, 5 and 6

Claims 2, 4, 5 and 6 of the '805 patent depend from claim 1. Because the undersigned has determined that claim 1 is not anticipated by Osada, the undersigned also finds that claims 2, 4, 5, and 6 of the '805 patent are not anticipated by Osada. *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) ("Because claim 3 is not inherently anticipated, dependent claims 4 and 5 also are not anticipated."); *see also Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987).

3. U.S. Patent No. 6,445,041 to Ishida

a) Claim 1

Respondents argue that they have established that each limitation of claim 1 of the '805 patent is disclosed by the embodiment in Figure 19 and described in the specification of Ishida '041. Respondents claim that the testimony and exhibits of its expert, Dr. Gosney, establishes the presence of each limitation of claim 1 in Ishida '041. (RIB at 164-165 (citing RX-353.1 at Q/A 58-61, 322-343; RDX-88 at 1-5; RDX-16; RDX-17).)

(i) "A memory cell comprising"

Respondents do not specifically discuss this claim term in their post-hearing briefs, but rather incorporate by reference testimony and exhibits in the record to support their position that this claim term is met by Ishida '041. (*Id.* at 165.) Respondents bear the burden of demonstrating by clear and convincing evidence that all claim terms in a reference are contained in the allegedly anticipating reference. Respondents' argument is not set forth in detail *in their brief.* Accordingly, Respondents have not shown that this claim term is included in Ishida '041.

(ii) "substantially oblong active areas"

As is the case 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. Respondents' sole support is the testimony of Dr. Gosney. (RX-353.1 at Q/A 326-335.) As noted in Section VI.A.1.a., "[i]t 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." *Hockerson-Halberstadt, Inc. v. Avia Grp. Int'l*, 222 F.3d 951, 956 (Fed. Cir. 2000) (internal citations omitted). Accordingly, Respondents have not shown by clear and convincing evidence that Ishida '041 meets the claim term "substantially oblong active areas."

(iii) "each of the inner active regions of the series comprises a pair of source/drain regions for a respective p-transistor, and each of the outer active regions of the series comprises a pair of source/drain regions for a respective n-channel transistor"

Respondents note that claim 1 requires a "p-channel transistor" in the two inner active regions and an "n-channel transistor" in the two outer active regions. (*Id.* at 166 (citing JX-1 at claim 1).) Respondents state that Ishida '041 discloses two inner active regions, elements 302a and 302b. (*Id.* (citing RX-465 at Fig. 19, col. 2:41-46; McAlexander, Tr. at 673:21-23).) Respondents assert that the parties also agree that Ishida '041 discloses two outer active regions, elements 301a and 301b. (*Id.* (citing RX-465, Fig. 19, col 2:41-46; McAlexander, Tr. at 673:17-20).)

Respondents argue that the specification of Ishida '041 expressly describes, exactly as required by claim 1 of the '805 patent, inner "active regions 302a and 302b in which a p-channel MOS transistor…will be formed," and outer "active regions 301a and 301b in which an n-channel MOS transistor . . . will be formed." (*Id.* (citing RX-465 at 2:41-46).) Respondents

state that Dr. Gosney confirms that this means exactly what it says and thus, satisfies the requirements of claim 1 of the '805 patent. (*Id.* at 166-167 (citing RX-353.1 at Q/A 336, 341-342).)

Respondents note that Mr. McAlexander also acknowledges that the actual words of the Ishida '041 specification disclose a p-channel transistor in the inner active regions and an n-channel transistor in the outer regions. (*Id.* at 167 (citing McAlexander, Tr. at 674:19-675:23).) However, Respondents assert that Mr. McAlexander goes on to argue that the specification is "wrong" in disclosing a p-channel transistor in the inner active regions and an n-channel in the outer active regions. (*Id.* (citing McAlexander, Tr. at 741:2-15).) Respondents state that, in fact, the specification is not "wrong" when it states just that. (*Id.* (citing McAlexander, Tr. at 674:19-675:23; RX-464 at 2:41-46; RX-353.1 at Q/A 336, 341-342).)

Respondents assert that the specification of Ishida '041 describes the memory cell of Figure 19, noting that "each memory cell includes two p-type active regions 301a and 301b in which an n-channel MOS transistor as a drive transistor will be formed." (*Id.* (citing RX-465 at 2:41-49).) Respondents argue that the prospective voice used in the phrase "in . . . which . . . transistor . . . will be formed" indicates that the regions 301a and 301b are p-type regions before the n-channel is formed. Respondents assert that the fact that an n-channel transistor was formed in a region that previously was labeled a p-type active region does not somehow convert the n-channel transistor to a p-channel transistor, and claims that Cypress cites to no evidence in the specification to the contrary. (*Id.*)

Respondents also claim that the phrase "and two-n-type active regions 302a and 302b in which a p-channel MOS transistor as a load resistor will be formed" uses the same prospective voice in the phrase "in which . . . transistor . . . will be formed," which indicates that regions 302a and 302b are "n-type" before the transistor is formed. (*Id.* at 167-168 (citing RX-465 at

2:41-49).) Respondents again note that nothing about this language suggests that the p-channel transistor is anything other than a p-channel transistor. (*Id.* at 168 (citing RX-353.1 at Q/A 340-342).)

Cypress asserts that Ishida '041 does not anticipate the '805 patent at least because the arrangement of its active regions is the opposite of that disclosed in the '805 patent. Cypress states that Ishida '041 discloses random access memory (SRAM) cell layouts with outer regions formed using p-type active regions to generate p-type transistors and with inner regions that have n-type active regions to form n-type transistors. (CIB at 156-157.) Cypress argues that Ishida '041 fails to disclose a device with a "series of four substantially oblong active regions formed within a semiconductor substrate and arranged side-by-side with long axes substantially parallel" where "each of the inner active regions of the series comprises a pair of source/drain regions for a respective p-channel resistor," and "each of the outer active regions of the series comprises a pair of source/drain regions for a respective n-channel resistor," as claimed in claim 1 of the '805 patent. (*Id.* at 157.) Cypress asserts that Ishida '041 only discloses parallel active regions with the arrangement backwards such that the outer regions are P-type and the inner regions are N-type as shown in RX-464 at 2:37-53. (*Id.*)

Cypress states that this is exactly the opposite to claim 1, which requires outer regions formed by n-channel transistors and the inner regions formed by p-channel transistors. Cypress argues that Respondents' expert misses the point by confusing an n-type active area with an n-well that creates p-type transistors and a p-type active area with a p-well that creates n-type transistors. Cypress states that Respondents' expert therefore contradicts the clear language of the specification of Ishida '041, which clearly states that the outer regions are comprised of p-

type active regions and the inner regions are comprised of n-type active regions. (*Id.* (citing CX-428C at Q/A 145).) Cypress asserts that this matters because "N-type pull down and access transistors are much faster than the P-type transistors disclosed in Ishida." (*Id.* at 157.) Cypress argues that the '805 patent's invention thus creates a memory cell, which meets the need for high speed while also meeting the requirements for stability. Cypress states that the Ishida '041 cannot do the same. (*Id.*)

Cypress states that if an active region will have N-transistors, it would not be described as "p-type." Cypress asserts that if an active region will have P-transistors, it would not be described as "n-type." (CRB at 69.) Further, Cypress argues that at best the Ishida '041 specification is ambiguous, and not clear and convincing evidence. (*Id.*)

Claim 1 of the '805 patent requires "each of the inner active regions of the series comprises a pair of source/drain regions for a respective p-channel transistor." (JX-1 at 13:47-14:1-2.) In describing Figure 19, Ishida '041 states "[i]n the SRAM, each memory cell **300** includes . . . two n-type active regions **302***a* and **302***b* in which a p-channel MOS transistor as a load transistor will be formed." (RX-465 at 2:42-44.) Reviewing the evidence and the testimony, the undersigned finds that the specification of Ishida '041 does mean what it says because Figure 19 and the specification clearly states that there will be a p-type transistor in the inner active regions **302***a* and **302***b*. (RX-465 at 2:42-46; RX-353.1 at Q/A 336.) In light of this evidence, particularly the language of the specification of Ishida '041 quoted above, Mr. McAlexander's testimony, which is that the Ishida '041 specification is incorrect, is not found to be persuasive. Accordingly, the undersigned finds that Ishida '041 meets this portion of claim 1.

Claim 1 of the '805 patent also requires that "each of the outer active regions of the series comprises a pair of source/drain regions for a respective n-channel transistor." (JX-1 at 14:2-4.)

The specification of Ishida '041, in describing Figure 19, states "[i]n the SRAM, each memory cell **300** includes two p-type active regions **301***a* and **301***b* in which an n-channel MOS transistor as a drive transistor will be formed." (RX-465 at 2:42-45.) Reviewing the evidence and the testimony, the undersigned finds that the specification of Ishida '041 does mean what it says because Figure 19 and the specification clearly states that there will be a n-type transistor in the outer active regions **301***a* and **301***b*. (RX-465 at 2:42-46; RX-353.1 at Q/A 336.) In light of this evidence, particularly the language of the specification of Ishida '041 quoted above, Mr. McAlexander's testimony, which is that the Ishida '041 specification is incorrect, is not found to be persuasive. Accordingly, the undersigned finds that Ishida '041 meets this portion of claim 1.

(iv) Conclusion

Since all limitations of claim 1 are not present in Ishida '041, Ishida '041 does not anticipate claim 1.

b) Claims 2, 4, 5 and 6

Claims 2, 4, 5 and 6 of the '805 patent depend from claim 1. Because the undersigned has determined that claim 1 is not anticipated by Ishida '041, the undersigned also finds that claims 2, 4, 5, and 6 of the '805 patent are not anticipated by Ishida '041. *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) ("Because claim 3 is not inherently anticipated, dependent claims 4 and 5 also are not anticipated."); *see also Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987).

VII. CONCLUSIONS OF LAW

1. The asserted claims of U.S. Patent No. 6,534,805 are not invalid under 35 U.S.C. § 102 for anticipation.

2. The asserted claims of U.S. Patent No. 6,262,937 are not invalid under 35 U.S.C. § 102 for anticipation.

3. The asserted claims of U.S. Patent No. 6,262,937 are not invalid under 35 U.S.C. § 103 for obviousness.

4. The asserted claims of U.S. Patent No. 6,651,134 are not invalid under 35 U.S.C. § 102 for anticipation.

5. The asserted claims of U.S. Patent No. 7,142,477 are not invalid under 35 U.S.C. § 102 for anticipation.

6. The asserted claims of U.S. Patent No. 7,142,477 are not invalid under 35 U.S.C. § 103 for obviousness.

7. U.S. Patent No. 7,142,477 is enforceable.

VIII. REMAND INITIAL DETERMINATION

Based on the foregoing, it is the Remand Initial Determination of the undersigned that U.S. Patent Nos. 6,534,805, 6,651,134, 7,142,477, and 6,262,937 are valid, and that U.S. Patent No. 7,142,477 is enforceable.[16]

The undersigned hereby CERTIFIES to the Commission this Initial Determination, together with the record of the hearing in this investigation consisting of the following: the transcript of the evidentiary hearing, with appropriate corrections as may hereafter be ordered; and the exhibits accepted into evidence in this investigation as listed in the attached exhibit lists.[17]

---

[16] Arguments made on brief which were otherwise unsupported by record evidence or legal precedent have been accorded no weight. Additionally, any arguments from the parties' pre-hearing briefs incorporated by reference into the parties' post-hearing briefs are stricken, unless otherwise discussed herein, as an improper attempt to circumvent the page limits imposed for post-hearing briefing.

[17] The pleadings of the parties filed with the Secretary are not certified as they are already in the Commission's possession in accordance with Commission rules.

The Secretary shall serve a public version of this Initial Determination upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order (Order No. 1) issued in this Investigation.

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 19 C.F.R. § 210.43(a) or the Commission, pursuant to 19 C.F.R. § 210.44, orders on its own motion a review of the Initial Determination or certain issues therein.

Within ten days of the date of this document, the parties shall submit to the Office of Administrative Law Judges a joint statement regarding whether or not they seek to have any portion of this document deleted from the public version. The parties' submission shall be made by hard copy and must include a copy of this Initial Determination with red brackets indicating any portion asserted to contain confidential business information to be deleted from the public version. The parties' submission shall include an index identifying the pages of this document where proposed redactions are located. The parties' submission concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.

Charles E. Bullock
Chief Administrative Law Judge

IN THE MATTER OF CERTAIN STATIC RANDOM ACCESS MEMORIES AND PRODUCTS CONTAINING SAME **337-TA-792**

CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **Public Version Remand Initial Determination On Validity And Unenforceability** has been served upon, the following parties via first class mail and air mail where necessary on MAR 15 2013 .

Lisa R. Barton, Acting Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112A
Washington, DC 20436

FOR COMPLAINANTS CYPRESS SEMICONDUCTOR CORPORATION:

Alexander J. Hadjis, Esq.
MORRISON & FOERSTER
2000 Pennsylvania Avenue, NW
Washington, DC 20006

( )Via Hand Delivery
(X)Via Overnight Mail
( )Via First Class Mail
( )Other:_____

FOR RESPONDENTS GSI TECHNOLOGY, INC., TELEFONAKTIEBOLAGET LM ERICSSON, MOTOROLA MOBILITY INC., HEWLETT PACKARD COMPANY/TIPPING POINT, AVNET, INC., TELLABAS, CISCO SYSTEMS, INC. & MOTOROLA SOLUTIONS, INC.:

Mark Fowler, Esq.
DLA PIPER LLP
2000 University Avenue
East Palo, CA 94303

( )Via Hand Delivery
(X)Via Overnight Mail
( )Via First Class Mail
( )Other:_____

IN THE MATTER OF CERTAIN STATIC RANDOM ACCESS MEMORIES AND PRODUCTS CONTAINING SAME **337-TA-792**

PUBLIC MAILING LIST

Angela Ruby
LEXIS - NEXIS
9443 Springboro Pike
Miamisburg, OH 45342

( )Via Hand Delivery
( )Via Overnight Mail
(X)Via First Class Mail
( )Other:_____

Kenneth Clair
THOMSON WEST
1100 – 13th Street NW, Suite 200
Washington, DC 20005

( )Via Hand Delivery
( )Via Overnight Mail
(X)Via First Class M ail
( )Other:_____