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IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

RAMBUS INC., Plaintiff, v. HYNIX SEMICONDUCTOR INC., HYNIX SEMICONDUCTOR AMERICA INC., HYNIX SEMICONDUCTOR MANUFACTURING AMERICA INC., SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC., SAMSUNG SEMICONDUCTOR, INC., SAMSUNG AUSTIN SEMICONDUCTOR, L.P., NANYA TECHNOLOGY CORPORATION, NANYA TECHNOLOGY CORPORATION U.S.A., Defendants.	No. C-05-00334 RMW ORDER ON THE MANUFACTURERS' *DAUBERT* MOTION No. 1 TO PRECLUDE TESTIMONY OF ROBERT MURPHY ON SECONDARY CONSIDERATIONS OF NONOBVIOUSNESS **[Re Docket No. 2412]**
RAMBUS INC., Plaintiff, v. SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC., SAMSUNG SEMICONDUCTOR, INC., SAMSUNG AUSTIN SEMICONDUCTOR, L.P., Defendants.	No. C-05-02298 RMW **[Re Docket No. 1257]**

RAMBUS INC., Plaintiff, v. MICRON TECHNOLOGY, INC., and MICRON SEMICONDUCTOR PRODUCTS, INC. Defendants.	No. C-06-00244 RMW **[Re Docket No. 1497]**

Rambus has accused the Manufacturers[1] of infringing various patents. Trial is scheduled for January 19, 2009. Pursuant to a case management deadline for filing *Daubert* motions, the Manufacturers have filed a motion challenging the ability of Robert Murphy (Rambus's technical expert) to testify regarding secondary considerations allegedly relevant to show that Rambus's patent claims were not obviousness on their effective filing date. Specifically, the Manufacturers assert that Murphy lacks a sufficient foundation to express an opinion that: (1) the patented inventions enjoyed commercial success; (2) various DRAM manufacturers entered into licensing agreements with Rambus; (3) there was "long-felt need" for the claimed inventions; (4) there were "unsuccessful attempts by others" to solve the problem solved by the claimed inventions; (5) there was copying of the claimed inventions; (6) there were "unexpected superior results" from the claimed inventions; and (7) there was "praise from others" concerning the claimed inventions. Rambus opposes the motion.[2] The court has reviewed the papers and considered the arguments of counsel. For the following reasons, the court partially grants and partially denies the motion.

I. LEGAL STANDARD

Federal Rule of Evidence 702 governs the admissibility of expert testimony. An expert must be qualified by virtue of his or her "knowledge, skill, experience, training, or education." FRE 702. Expert testimony must also be helpful to the trier of fact in understanding the evidence or

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[1] The court collectively refers to the Hynix, Micron, Nanya, and Samsung entities in this suit as "the Manufacturers."

[2] Hynix filed a similar motion in a previous case between it and Rambus. *See Hynix Semiconductor, Inc. v. Rambus Inc.*, C-00-20905, Docket No. 1790, 8-9 (N.D. Cal. Mar. 2006).

determining a fact in issue. *Id.* Finally, the court must be convinced that the expert testimony is reliable. *Id.* Reliable testimony must be (1) "based upon sufficient facts or data," (2) "the product of reliable principles and methods," and (3) a sound application of the principles to the facts. *Id.* "Facts or data" may include other experts' reliable opinions or hypothetical facts that are supported by the evidence. FRE 702, Adv. Committee Note (2000); *see* FRE 703. The party offering expert testimony must demonstrate by a preponderance of the evidence that its expert's opinions are reliable. *See In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 743-44 (3d Cir. 1994).

The Supreme Court has confirmed that "the Rules of Evidence—especially Rule 702—do assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 597 (1993); *Cooper v. Brown*, 510 F.3d 870, 942-43 (9th Cir. 2007). While the court has broad discretion in deciding whether that standard has been met, the court cannot shirk its gatekeeper duties. *See General Elec. Co. v. Joiner*, 522 U.S. 136, 142, 146 (1997); *compare with id.* at 148 (Breyer, J., concurring). The purpose for this gatekeeping is to ensure that an expert applies the same level of rigorous analysis inside the courtroom as he would outside. *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 152 (1999).

The parties basically agree on the analytical framework the court must use. However, Rambus characterizes the Manufacturers' motion as seeking to apply a heightened gatekeeping standard with respect to evidence of secondary considerations of nonobviousness. The Manufacturers respond that a higher standard does not apply but that the "gatekeeping requirement applies with special force to expert opinions on secondary indicia of nonobviousness." Reply at 1:15-23. The parties' only disputes, therefore, relate to how the court exercises its discretion with specific aspects of Mr. Murphy's testimony. Ironically, the parties appear to have had changes of heart with respect to how carefully the court should scrutinize expert testimony. *See, e.g., Hynix Semiconductor, Inc. v. Rambus Inc.*, 2008 WL 73686, *1 (N.D. Cal. Jan. 5, 2008) (noting Rambus's emphasis of the "substantial danger" and "quite misleading" nature of improper expert testimony while some of the Manufacturers characterized the court's gatekeeping duty as "limited" and that

"rejection of expert testimony is the exception rather than the rule.").

II. ASPECTS OF MR. MURPHY'S INTENDED TESTIMONY

Mr. Murphy's analysis and opinions appear in his rebuttal report of September 26, 2008. Docket No. 2425, Omnibus Decl. of Sven Raz, Ex. 1 (Oct. 24, 2008) (hereinafter "Murphy Report"). Because of the intricate, factual nature of the parties' arguments, the court dispenses with a background discussion of Mr. Murphy's expert analysis. The court refers to Mr. Murphy's report and other facts while considering each of the Manufacturers' arguments.

A. Commercial Success of the Claimed Inventions in the Manufacturers' Products

1. The Relevance of Commercial Success Evidence

The problem of hindsight plagues the nonobviousness inquiry. *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742 (2007) ("A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning."). For example, in this case, the court must determine whether the inventions of Drs. Farmwald and Horowitz were obvious to a person of skill in the art as of 1990, i.e., almost 19 years ago. Recreating the mindset of a person of ordinary skill in the art, and not forming a bias based on the course of innovation in the field in the past two decades, is exceptionally difficult.

Hence, commercial success (and other secondary considerations) can be "the most probative and cogent evidence in the record" with respect to nonobviousness. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538-39 (Fed. Cir. 1983); *see Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1129 (Fed. Cir. 2000). Such evidence displays two virtues that can make it persuasive. First, it is contemporaneous, or at least much closer in time than the pending dispute. Second, it reflects the actions of others who presumably lack any bias induced by litigation.

The chain of inferences that makes evidence of commercial success suggest non-obviousness is not short though. To demonstrate non-obviousness, the patentee must establish a nexus between the claimed invention and the marketed product. *Brown & Williamson*, 229 F.3d at 1130. A presumption that such a nexus exists arises if the patentee can show that the marketed product "embodies the claimed features" and "is coextensive with them." *Id.* The reason for the first part of

this inquiry is obvious: the patentee must show that the marketed product embodies (that is, infringes or is covered by) the patent claim. If the product does not read on the claim, there can be no relevance of the product's commercial success to whether the claim is obvious or not. But for a presumption to attach, the patentee must also show that the claimed invention is "coextensive" with the product. *Id.* The reason for this part of the inquiry is equally important, but less clear. This requirement accommodates the reality that many products embody dozens of patents or features and that their success or failure cannot solely be attributed to any particular one. Where the product is coextensive with the claimed invention, for example, where the product might be a pharmaceutical compound and the claimed invention the active ingredient, the patentee's evidence of the commercial success of the product is relevant to obviousness. Upon that showing, one can infer that society's demand for the patented pharmaceutical suggests the existence of a problem that the product solves. That demand also suggests that others of skill in the art may have felt an incentive to try to solve the problem but failed. These inferences tend to suggest that the claimed invention would not have been obvious to one of skill in the art.

Where the product is *not* coextensive with the claimed invention, this chain of reasoning breaks down. For example, if a product embodies several claimed inventions, why should any one invention be presumed to be the cause of its success? Put another way, how could one tell that the product's success was due to the claimed invention at issue and not the collective utility of the other inventions? Thus, where the product is not coextensive with the claimed invention, the patentee must show more to establish the chain of inference that suggests that the claimed invention is non-obvious. *Id.* This showing can take many forms, but it must explain how the product's commercial success was caused, at least in part, by the claimed invention and not by "other economic and commercial factors unrelated to the technical quality of the patented subject matter." *Cable Elec. Products, Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1027 (Fed. Cir. 1985), *overruled on other grounds Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356 (Fed. Cir. 1999). For example, evidence that the product has captured a substantial share of a market (or that its share is skyrocketing) after introduction of the patented feature might establish a nexus. *Id.* So might

evidence that the patented product became more profitable than other products in the market after introduction of the patented feature (suggesting that consumers were paying a premium to use the patented feature).

The parties dispute what the proponent of commercial success evidence must establish before such evidence is admissible. The Manufacturers argue that "*Daubert's* gatekeeping requirement applies with special force to expert opinions on secondary considerations of nonobviousness" (Mot. at 5:13-15), thus implying that there must be a strong showing of a nexus between the claimed invention and the product's commercial success in order to meet FRE 402's relevance threshold for admissibility. Rambus, on the other hand, submits that "evidence of nexus does not go to admissibility at all, but instead to the weight such evidence is given." Opp'n 4:25-5:1. Interestingly, the case of *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387 (Fed. Cir. 1988), which discusses the issue in detail, is relied upon by both sides. It instructs:

> When a patentee asserts that commercial success supports its contention of nonobviousness, there must of course be a sufficient relationship between the commercial success and the patented invention. The term "nexus" is often used, in this context, to designate a legally and factually sufficient connection between the proven success and the patented invention, such that the objective evidence should be considered in the determination of nonobviousness. The burden of proof as to this connection or nexus resides with the patentee.
>
> In meeting its burden of proof, the patentee in the first instance bears the burden of coming forward with evidence sufficient to constitute a prima facie case of the requisite nexus.
>
> The phrase "prima facie case" may be used by courts to describe the plaintiff's burden of producing enough evidence to permit the trier of fact to infer the fact at issue.
>
> The judge, using ordinary reasoning, may determine that fact A might reasonably be inferred from fact B, and therefore that the party has satisfied his burden [of producing evidence], or as sometimes put by the courts, has made out a "prima facie" case.

Id. at 1393 (internal citations omitted). *Demaco* points out, for example, that testimony concerning the advantages of a patented feature in a multi-featured product is sufficient to support the inference of a nexus between the patented feature and the commercial success. *Id*. at 1393. Therefore, the proper inquiry for determining the admissibility of evidence proffered to support a secondary consideration, such as commercial success, is whether the proffered evidence has any tendency,

either by itself or in conjunction with other evidence, permits the trier of fact to infer the existence of the secondary factor.

2. Mr. Murphy's Report

With respect to commercial success, Mr. Murphy explains:

> ***Commercial Success.*** The inventions disclosed in the '898 application and claimed in the Farmwald/Horowitz Patents-in-suit, [sic] have been very successful. Synchronous memory devices utilizing multiple claimed inventions make up virtually all current DRAM sales. Moreover, as I discuss further below, the claimed inventions are responsible for increasing DRAM bandwidth, solving the memory bottleneck problem and leading to the commercial success of products using the inventions.

Id. ¶ 165. It not clear what Mr. Murphy refers to when he points to his discussion "further below." He briefly discusses the memory bottleneck problem in the next paragraph of his report and states that "[t]he inventions disclosed in the '898 application and claimed in the Farmwald/Horowitz Patents-in-suit, [sic] have been instrumental in increasing DRAM performance to help meet the ever increasing demands of processors." *Id.* ¶ 166.

Rambus argues that Mr. Murphy demonstrates how the claimed inventions have been successful in a background technology discussion in Mr. Murphy's report. Opp'n at 3:26-4:2 (citing Murphy Report ¶¶ 25-40). The cited paragraphs of his report scarcely discuss the claimed inventions. For example, the report concludes that "[t]he Patents-in-suit describe inventions which improve the performance and speed of data storage and retrieval in memory devices like those used in personal computers." *Id.* ¶ 30. Mr. Murphy mentions the claimed inventions once more: "[t]he inventions disclosed in the '898 application enable numerous improvements in how synchronous memory devices are able to interface with the outside world, greatly increasing the efficiency of data storage and retrieval." *Id.* ¶ 40. Among other failings, the discussion never (a) says what the claimed inventions are, (b) explains how they "greatly" increase data storage efficiency, or (c) compares the commercial success of memory devices using the claimed inventions versus the commercial success of memory devices that do not. Rambus thus greatly overstates its case when it describes this portion of Mr. Murphy's report as "extensive testimony."

3. The Admissibility of Mr. Murphy's Opinion

The Manufacturers argue that the court must exclude Mr. Murphy's opinion regarding commercial success because: (1) his analysis is irrelevant without evidence of nexus between the claimed inventions and the commercial success of JEDEC-standard DRAMs; (2) he is not qualified to render opinions on commercial success; and (3) his analysis is not based on reliable facts or a reliable methodology. The court finds that the Manufacturers' second and third arguments have merit and thus does not reach the question of whether Murphy has support for his opinion of a nexus between the claimed inventions and commercial success. The court bars Murphy from expressing an opinion that the inventions enjoyed commercial success, but he is not precluded from providing opinions that may assist Rambus in showing commercial success.

a. Mr. Murphy's Qualifications

Mr. Murphy studied electrical engineering and designed semiconductor devices for over 33 years. Murphy Report ¶¶ 3-4. He currently works at his own engineering design consulting firm; prior to that he was Director of Engineering at Silicon Graphics, Inc. *Id.* ¶ 5. Mr. Murphy has not held a marketing position. Beynon Decl., Ex. 2 at 4623:14-16. He has not managed inventory. *Id.* at 4623:17-20. He has no training in economics, and he is not an economist. *Id.* at 4623:21-25. He has no formal training in business administration, though he has run his own business for about a decade. *See id.* at 4624:1-9.

The Manufacturers argue that Mr. Murphy is not qualified to give expert testimony regarding commercial success. They note that in other patent cases, experts on commercial success tend to have backgrounds in economics or licensing. *See, e.g., Pfizer Inc. v. Teva Pharmaceuticals USA, Inc.*, 460 F. Supp. 2d 659, 664-65 (D.N.J. 2006). Rule 702, however, recognizes that people develop expertise in many ways and permits an expert to testify based on "knowledge, skill, experience, training, or education." Fed. R. Evid. 702; *Thomas v. Newton Int'l Enterprises*, 42 F.3d 1266, 1269 (9th Cir. 1994) ("Rule 702 is broadly phrased and intended to embrace more than a narrow definition of qualified expert."). Still, any expertise must relate to the issues in dispute such that the witness's expertise is helpful to the trier of fact. *See* 4 Weinstein's Federal Evidence § 702.04[1][b]. For example, a professor with "practical experience in international finance" was not qualified to testify

about whether a particular security was counterfeit or not because his general experience did not lend any insight into the specific issue in the case. *United States v. Chang*, 207 F.3d 1169, 1172-73 (9th Cir. 2000).

The Manufacturers' desire to prevent Mr. Murphy from testifying at all about commercial success is too broad. Their criticism of Mr. Murphy's qualifications does not impact Mr. Murphy's ability to testify about aspects of the commercial success inquiry, like whether a product embodies a claimed invention or possibly whether a product is coextensive with a claimed invention (though that does not appear to be the case here). If the claimed inventions are not coextensive with the Manufacturers' products, Mr. Murphy's qualifications and testimony could even aid the jury in understanding the performance value provided by a claimed invention. *E.g.*, Murphy Report ¶ 188 (discussing the performance advantages of implementing auto-precharge).

But Mr. Murphy lacks the expertise needed to testify about the commercial aspects of this inquiry. *Accord Sundance, Inc. v. DeMonte Fabricating Ltd.*, --- F.3d ----, 2008 WL 5351734, *2-*6 (Fed. Cir. 2008). He lacks the expertise to explain whether or not advertising, standardization, import laws, contractual relationships, or any of a number of other factors influenced the commercial success of the Manufacturers' products. Rambus barely argues otherwise. *See* Opp'n at 6:6-18. Rambus notes Mr. Murphy's experience working "at companies large and small in the industry over 33 years." First, this experience alone does not suggest expertise on why particular products are commercially successful. Second, as discussed above, none of Mr. Murphy's experience relates to the business administration and marketing aspects of this portion of the commercial success inquiry. Rambus contends that Mr. Murphy has similar credentials to the Manufacturers' expert, Mr. McAlexander, and the Manufacturers offer Mr. McAlexander as an expert on secondary considerations of non-obviousness like commercial success. Rambus's "sauce for the goose, sauce for the gander" argument does not provide a basis for denying a meritorious motion to prevent Mr. Murphy from testifying as an expert in certain areas. At best, it suggests that perhaps Rambus should have filed a motion that copies the Manufacturers' arguments.

Accordingly, Mr. Murphy cannot testify to the conclusion that Rambus's inventions "have

been very successful" or that they "[led] to the commercial success of products using the inventions." *See* Murphy Report ¶ 165. He is qualified to render technical opinions like "the claimed inventions are responsible for increasing DRAM bandwidth [and] solving the memory bottleneck problem."

b. Mr. Murphy's Methodology

The Manufacturers also challenge the methodology Mr. Murphy used to conclude that the claimed inventions caused the commercial success of their products. This portion of the Manufacturers' motion attacks proposed testimony the court has already excluded on the basis of Mr. Murphy's lack of specialized expertise. Nonetheless, it is clear from Mr. Murphy's report that he did no analysis. His reasoning appears to be: the Manufacturers' products incorporate Rambus's claimed inventions; those products have been successful; *ergo* Rambus's inventions caused the products' success. Rule 702(2) demands more, and it provides an independent basis for preventing Mr. Murphy from testifying to the non-technical aspects of the commercial success inquiry.

B. Rambus's Patent Licenses

1. The Relevance of Licensing Evidence

Like the commercial success of products incorporating the claimed technology, the decision by other entities to license a claimed invention can support the inference that the invention is not obvious. *See, e.g., Iron Grip Barbell Co., v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004). Such licensing is relevant because it tends to suggest that another entity considered the technology valuable enough to use in its operations and that the entity investigated the validity of the patent (including its obviousness) and decided to take a license. This inference requires proof beyond the mere existence of a license for the license to carry persuasive weight in the final obviousness analysis conducted by the court. *Id.* ("There is no such evidence of a nexus here; hence the existence of licenses is of little significance."). The Federal Circuit requires this showing because entities sign licenses for a variety of reasons. *See id.* Some inventions get licensed because a settlement is cheaper than litigation despite the entity's possible belief that a claim is obvious. *Id.* Other inventions get licensed as part of a blanket cross-license whose terms may have been dictated

by any of dozens or hundreds of other patents, and not the claims-in-suit. Such cross-licenses suggest little about another entity's belief in the validity or value of a single claimed invention without an understanding of the licensing negotiation.

2. Mr. Murphy's Opinion Regarding Licensing

Mr. Murphy's analysis of Rambus's patent licenses spans two paragraphs. Murphy Report ¶¶ 200, 201. It consists of him listing a number of entities that have licensed Rambus's patent portfolio and his opinion that the patents licensed cover SDRAM and DDR SDRAM. *See id.* Mr. Murphy's analysis does not consider: (1) the terms of the licenses, (2) what other patents were licensed, (3) whether the licensees manufacture any products or conduct any activities that would infringe the patents, or (4) how the cost of the license relates to the risk of litigation. Based on his listing of these licenses, Mr. Murphy concludes that "there appears to be general industry acceptance by others of the Rambus patents-in-suit with claims that include SDRAM and DDR SDRAM." *Id.* ¶ 200.

3. The Admissibility of Mr. Murphy's Analysis

It is difficult to describe Mr. Murphy's two paragraphs as "analysis." He has not scrutinized the licenses with the same rigor applied by professionals in the field of licensing. While he considered the royalty rates provided for in the licenses, Beynon Decl., Ex. 4 at 443:10-445:3, his report lacks any indication that he considered the business or negotiating context of the licenses.

Of course, Rambus may be able to introduce the licenses into evidence through a competent witness as relevant to the issue of nonobviousness. Mr. Murphy's reports do permit him to testify regarding infringement. Thus, he can testify that the patent claims included in the licenses read on SDRAM, DDR SDRAM, and other memories. But Mr. Murphy cannot testify to his conclusion that "there appears to be general industry acceptance by others of the Rambus patents-in-suit with claims that include SDRAM and DDR SDRAM." His analysis does not come close to the rigor employed by licensing professionals in evaluating the terms of a license and whether a license reflects acceptance by others of the non-obviousness of an invention.

4. The Top 10 List and Identities of Prior Art Owners

Mr. Murphy's discussion of whether the claimed inventions have been accepted by others contains two intriguing facets. First, Mr. Murphy cites a Patent Office list of the organizations that received the most patents in 2005. Murphy Report ¶ 201. Mr. Murphy then notes that five of the listed companies licensed Rambus's patents. Second, Mr. Murphy lists asserted prior art references that were assigned to or developed by Rambus licensees (primarily Intel). *Id.* ¶ 202.

To the extent Mr. Murphy conducts any analysis, it is to remark that "I understand that competitors presumably are persons who understand the industry (and the prior art) and would not ordinarily act in a fashion contrary to their economic interests unless convinced of a patent's non-obviousness." *Id.* ¶ 200. The major flaw in Mr. Murphy's analysis is that without an analysis of the terms of, for example, the license between Rambus and Intel, it is impossible for Mr. Murphy to reliably conclude that Intel acted against its economic self-interest by licensing the patents despite possessing alleged prior art references. Mr. Murphy's analysis also imputes upon a licensee a perfect knowledge of every patent it owns and reference it creates and how those references map to Rambus's claims.

The exclusion of Mr. Murphy's opinion is a different issue than that of the admissibility of the underlying evidence, but the relevance of the underlying evidence does not determine whether an expert's opinion is admissible. An expert's opinion must apply a reliable methodology to reach a helpful conclusion based on some expertise or specialized knowledge. The text of Mr. Murphy's report makes clear that he has not done this. He "[is] aware" of a list of patent recipients. *Id.* ¶ 201. He has "been informed" about Rambus's licenses. *Id.* He "notes" the owners of various prior art references. *Id.* ¶ 202. He does not *analyze* how the ownership of prior art impacted the decisions by those companies to take a license to the claimed inventions.

There is no basis for Mr. Murphy to present the Patent Office's "Top 10" list to the jury. It is subject to even less analysis than the prior art ownership issue discussed above. Rambus argues: "The fact that many industry members who themselves obtain many patents, including Matsushita, Intel, Hitachi, Toshiba, and Fujitsu, decided to license the patents-in-suit for use in SDRAM and DDR SDRAM, is clearly relevant to the existence of industry respect for the claimed inventions."

Rambus fails to explain this "clear" relevance. The license agreements may possess a minimum degree of probative value. But noting that various companies that took licenses themselves receive thousands of patents is irrelevant. No chain of inferences connects a fact of consequence to the number of patents owned by Rambus's licensees. The only conceivable chain of inferences goes something like:

1. Rambus licensees received more patents in a certain year than other companies.

2. Because these companies received more total patents than other companies, it is possible that they spend more resources per capita on obtaining patents than other companies.

3. Because these companies spend more resources to obtain patents, they must also spend more resources to investigate or scrutinize patents.

4. Therefore, the licensees listed by the Patent Office must have scrutinized Rambus's claimed inventions closely and deemed them valid and useful.

This is simply too attenuated for the list to be admissible. The logic underlying the inferences is highly speculative. Many of the companies listed are conglomerates; their domination of the patent recipient list sheds little light on their importance to the field of DRAMs. The third inference is particularly dubious. Companies with thousands of patents may spend *less* on scrutinizing a business partner's patents because of the ability to cross-license their portfolios. Simply put, the list is irrelevant, whether presented through Mr. Murphy or another witness.

C. Long-Felt Need

1. The Relevance of Evidence About "Long-Felt Need"

Establishing the existence of a "long-felt need" for the claimed invention in the industry can suggest that the invention was not obvious. *Texas Instruments Inc. v. U.S. Int'l Trade Com'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993). A "long-felt need" implies the existence of an articulated and identified problem in the art calling out for a solution. *Id.* The existence of a "long-felt need" for a solution to the problem suggests that others of skill in the art tried to solve the problem, but did not develop the claimed invention (which must, of course, solve the problem). In turn, this suggests that the claimed invention is not obvious.

2. Mr. Murphy's Analysis

With respect to long-felt need, Mr. Murphy explains:

> ***Long felt need.*** I expect to testify that there was a long felt need for the claimed inventions. The CPU-DRAM performance gap was a growing problem at the time of Rambus's inventions. Exhibit 23 Patterson (1990) at 426-27. "Innovative organizations of main memory are needed." Patterson (1990) at 427. The speed of microprocessors was improving, but it was believed that memory performance would not keep up. This performance has been referred to as the memory bottleneck, where memory technology would limit computer system performance. There thus existed a need to develop technology that improved the speed and efficiency of data transfer to and from memory devices. The inventions disclosed in the '898 application and claimed in the Farmwald/Horowitz Patents-in-suit have been instrumental in increasing DRAM performance to help meet the ever increasing demands of processors.

Id. ¶ 166.

Rambus also points to Mr. Murphy's very general discussion regarding different aspects of synchronous DRAM interfaces. *Id.* ¶¶ 43-50. For example, Mr. Murphy generally explains how an external clock signal operates. *Id.* ¶¶ 43-44. He discusses how synchronous DRAMs sample operation codes and how this differs from the operation of asynchronous DRAMs. *Id.* ¶ 45. He also shows how operations of variable burst length permit a DRAM to operate differently from prior art asynchronous DRAMs and how using a synchronous clock can increase efficiency. *Id.* ¶ 46. Mr. Murphy further outlines how implementing auto-precharge can make a DRAM interface more efficient. *Id.* ¶ 47. He very succinctly discusses how dual-edged clocking makes data transfer faster. *Id.* ¶ 48. Finally, Mr. Murphy lays out how use of a DLL and read and write latency can improve efficiency. *Id.* ¶¶ 49-50. This portion of Mr. Murphy's report couches its discussion in terms of features that the '898 patent "discloses." It does not tether its discussion to the claimed inventions.

Additionally, Rambus relies on Mr. Murphy's discussion in paragraphs 181 to 184 in which Mr. Murphy states that based on his experience, there was a need for faster DRAMs around 1990.

3. The Admissibility of the Long Felt Need Opinion

The Manufacturers attack Mr. Murphy's proposed testimony on two grounds. First, they argue that Mr. Murphy's opinion is not based on sufficient facts or data to be a reliable opinion. Second, they contend that Mr. Murphy's opinion fails to show that the claimed inventions solve the articulated problem for which there was a long-felt need.

As framed by Rambus, Mr. Murphy considered two things in forming his opinion on long-felt need: the Patterson text and his personal experience. *See* Opp'n at 7:5-9. That is not a sufficient body of facts on which to form a reliable opinion about what the field felt about the state of the technology, particularly given Mr. Murphy's limited experience in the DRAM industry. *Cf. Texas Instruments*, 988 F.2d at 1178 (affirming a finding of long felt need based on a consideration of multiple early attempts to solve a problem). Although Mr. Murphy's experience allows him to testify regarding how the claimed inventions work, how they differ from prior art and whether the accused products infringe, his experience does not suggest that he would have knowledge concerning long felt needs in the DRAM industry. His involvement with the DRAM industry appears minimal and he has had no experience in marketing DRAMs and minimal, at best, in designing them. A sufficient showing should include some minimum effort to survey industry publications or consider the efforts of multiple persons in the field to solve the alleged bottleneck problem, at least absent evidence of extensive experience in design or marketing in the DRAM industry.

Mr. Murphy can testify to what the patents accomplished and how the various features are distinguishable over prior art and how memory speed was increased. He also has sufficient experience to explain that CPU processing speeds were increasing. These discrete facts are individually admissible as relevant evidence and may, along with other evidence, suggest a long felt need. However, they are not facts that by themselves provide a foundation for Mr. Murphy to testify as an expert that the DRAM industry in 1990 suffered from a long-felt need to increase the speed of memory in order to keep up with increasing CPU speeds.

Because Mr. Murphy's analysis is not based on sufficient facts or data, the court does not reach Mr. Murphy's alleged failure to show that the claimed inventions solve the problem for which the field felt there was a need.

D. Unsuccessful Efforts

Evidence of unsuccessful efforts at solving a problem that a claimed invention does, in fact, solve suggests that a claimed invention is not obvious. *See Pentec, Inc. v. Graphic Controls Corp.*,

776 F.2d 309, 316 (Fed. Cir. 1985). Mr. Murphy's report includes the following discussion of the failures of others:

> ***Unsuccessful attempts by others to find the solution provided by the claimed invention.*** There were unsuccessful attempts by others to find the solutions provided by the claimed invention, namely a memory device that could keep pace with the increasing CPU demands. As an example, Burst EDO (extended data out), which is an asynchronous memory device that was developed as an enhanced version of EDO DRAM in the mid-1990s, and marketed by Micron and others as a solution to the memory bottleneck, was not commercially successful. Similarly, IBM developed "High Speed Toggle" or "HST" memory devices, which modified standard asynchronous memory devices. The HST devices did not use an external clock signal, but rather a toggle signal that caused data to be input and output similar to the pulsed control signals described in the *Inagaki* reference asserted by Mr. McAlexander. The HST devices, however, did not gain acceptance in the industry.

Murphy Report ¶ 167.

The problems with this line of proposed testimony are significant. Mr. Murphy does not explain the basis for his conclusion that these devices failed to succeed in the market. Mr. Murphy also does not explain why he believes these devices embody efforts to solve the problem of developing memory devices that could keep pace with microprocessors, as opposed to other problems in memory design like power consumption or cost. Finally, Mr. Murphy does not link this testimony back to why specific claimed inventions are, in his opinion, not obvious.

Rambus recognizes that the Manufacturers challenge Mr. Murphy's basis for his opinion. Opp'n at 11:19-12:2. Yet Rambus opposes the motion by pointing out that the Manufacturers do not challenge Mr. Murphy's conclusions. Opp'n at 12:3-9. Rambus never responds to the charge that Mr. Murphy's opinion lacks any support. At best, Rambus claims that Mr. Murphy can share these opinions with the jury based on his "experience." But Mr. Murphy does not explain how his experience justifies his opinion, as he must. Accordingly, the Manufacturers' motion to preclude Mr. Murphy from testifying about the unsuccessful efforts of others based on the Toggle Mode and Burst EDO DRAMs is granted.

E. Copying

"[C]opying by a competitor may be a relevant consideration in the secondary factor analysis." *Iron Grip Barbell*, 392 F.3d at 1325. But "[n]ot every competing product that arguably falls within the scope of a patent is evidence of copying," else "every infringement suit would

automatically confirm the nonobviousness of the patent." *Id.* Evidence of copying that is probative of nonobviousness must show "the replication of a specific product." *Id.*

Mr. Murphy has an opinion about copying. He writes:

> ***Copying of the claimed invention by others.*** Rambus's inventions were copied by the DRAM industry. It was only after Rambus had made presentations about its technology to many JEDEC participants that certain Rambus inventions were incorporated into the JEDEC SDRAM standard. Samsung engineers reviewed Rambus patents before making their initial proposal for a DDR SDRAM device. Micron engineers also reviewed Rambus patents prior to DDR SDRAM standardization. Hynix's design documents for its first DDR device expressly refer to Rambus technology in connection with dual-edge clocking and on-chip DLL. *See* Exhibit 27.

Murphy Report ¶ 174. Mr. Murphy can testify as to what Rambus's disclosures revealed and whether any Manufacturer's products or documents or JEDEC standards contain substantially similar features. However, he lacks a sufficient foundation for an opinion that any Manufacturer "copied" Rambus's disclosure. Further, his conclusory opinion that some Rambus feature was "copied" would not assist the jury "to understand the evidence or to determine a fact in issue." FRE 702. This ruling, however, does not preclude Rambus from arguing that the evidence shows that its specification was copied, if the evidence justifies such an inference.

F. "Unexpected Superior Results" and "Praise From Others"

Mr. Murphy's comments about unexpected results appears merely to paraphrase what Dr. Horowitz and Dr. Farmwald have said. He gives no independent basis for this opinion. Further, he talks about skepticism that Rambus's inventions could achieve a 500 Mbit per second per pin data rate. In addition to not providing a source for this skepticism other than what he understands the inventors said, he notes that an RDRAM in 1992 achieved that data rate. The RDRAM included the narrow, multiplexed bus which is not one of the claimed features in this case. *See* Murphy Report ¶ 168. Mr. Murphy is precluded from expressing the opinion that Rambus's inventions achieved unexpected results.

The Manufacturers similarly object to Mr. Murphy's opinion that praise from others suggests that the Rambus claimed inventions were not obvious. Mr. Murphy's report fails to tie the specific combinations claimed in this case to any particular aspect of the paper regarding RDRAM for the

1992 Symposium on VSLI Circuits. Although the paper discussed variable burst length, dual-edge clocking and on-chip PLL or DLL, those concepts in and of themselves are not the claimed inventions. Rambus's claimed inventions involve those features as a component of a combination and there is no nexus shown between the claims at issue (which although supported by the disclosed specification had not yet been drafted, let alone issued) and the selection of the article as one of the top papers submitted. *See id.* ¶ 170. Mr. Murphy also offers no basis for tying the announcements of Dr. Horowitz's 2005 IEEE award or his 2007 election to the National Academy of Engineering to his work on the claimed inventions beyond what may be contained in the announcements themselves. Therefore, Mr. Murphy's opinion would provide no assistance the jury in understanding the evidence or determining a fact in issue. *See* FRE 702.

G. Lack of Independent Invention

The parties agree that Mr. Murphy will not testify that the issuance of the claims at issue demonstrates lack of independent development by others. However, Mr. Murphy can testify that he has found no prior art that anticipates or renders obvious the claims at issue.

H. Conclusion

Many discrete pieces of evidence related to secondary considerations of non-obviousness cited by Mr. Murphy are relevant. That does not mean that Rambus may get them into evidence by having Mr. Murphy recite them. To give expert testimony, Mr. Murphy must use his expertise to *rigorously* analyze an issue and present his opinion. He has not done that in connection with most of his opinions on secondary considerations. Rambus may not put on its closing argument through Mr. Murphy as "expert testimony."

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III. ORDER

For the foregoing reasons, the court grants in part and denies in part the Manufacturers' *Daubert* motion no. 1. Mr. Murphy's testimony will be limited as described above.

DATED: 12/29/2008

RONALD M. WHYTE
United States District Judge

Notice of this document has been electronically sent to counsel in:

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Dated: 12/29/2008

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