#### **PUBLIC**

#### UNITED STATES OF AMERICA BEFORE THE FEDERAL TRADE COMMISSION

In the Matter of

Docket No. 9302

**RAMBUS INC.,** 

a corporation.

INITIAL POST-TRIAL BRIEF OF RESPONDENT RAMBUS INC.

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#### I. INTRODUCTION AND SUMMARY OF ARGUMENT

When the Commission authorized the filing of the Complaint in this case, a federal jury in Virginia had just returned a fraud verdict against Rambus Inc. (ARambus@) based on the theory that Rambus should have disclosed certain patent applications, or intentions to file or amend patent applications, to JEDEC. A necessary prerequisite to the jury=s finding of fraud was that Rambus had a duty to disclose patent applications or intentions to file or amend patent applications to JEDEC. Rambus Inc. v. Infineon Techs AG, 318 F.3d 1081, 1096 (Fed. Cir. 2003) (hereinafter AInfineon®). Thus, the Commission and Complaint Counsel might have presumed, based on the jury-s verdict, that such a duty did in fact exist under JEDEC=s rules, practices and procedures. During the course of this proceeding, however, it has become apparent that no such duty existed. Neither the written rules and policies of JEDEC, nor its procedures or regular practices, were consistent with a finding that there existed a duty to disclose patent applications or intentions to file or amend patent applications. Indeed, there is compelling evidence that no such duty existed at any time during Rambus=s membership in JEDEC.

when, how, and to whom the members must disclose does not provide a firm basis for the disclosure duty necessary for a fraud verdict. Without a clear policy, members form vaguely defined expectations as to what they believe the policy requires **B** whether the policy in fact so requires or not. JEDEC could have drafted a patent policy with a broader disclosure duty. It could have drafted a policy broad enough to capture a member=s failed attempts to mine a disclosed specification for broader undisclosed claims. It could have. It simply did not.@

Infineon, 318 F.3d at 1102 (footnote omitted).

Complaint Counsel have argued, and certainly will argue again, that the record evidence in this case is different than the record evidence in *Infineon*, so that a different result may be reached here. Complaint Counsel also may argue that the legal standard under which the evidence is to be judged is different here from the standard applicable in the Virginia trial.

Although Complaint Counsel would be correct in contending that there was additional evidence offered in this case regarding JEDEC=s supposed patent policy, what that additional evidence shows, even <u>more</u> clearly than the record evidence in the *Infineon* case, is that JEDEC did <u>not</u> require and its members did <u>not</u> expect disclosure of patent applications or of intentions to file or amend patent applications. The evidence in this case further makes plain that no two members of JEDEC **B** at least no two members who testified in this trial **B** had the same understanding of JEDEC=s patent policies or the disclosure expectations of JEDEC=s members.

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However framed, Complaint Counsels theory of this case depends upon Rambus having had a duty to disclose patent applications to JEDEC. In the absence of such a duty **B** and the record evidence establishes beyond any question that there was no such duty **B** Complaint Counsels claims must fail. Further, because so many aspects of JEDECs patent policies are vague, uncertain and not clearly stated, and because so many are interpreted and understood differently by different JEDEC members, JEDECs patent policy lacks the certainty and clarity that are required in order for a breach of such a policy to provide the predicate for an antitrust claim.

There are numerous other reasons why this Court should find that Complaint Counsel have not met their burden of proof. As summarized below and as set forth in much greater detail in Rambus=s Proposed Findings of Fact and Conclusions of Ław (hereinaft -0.,ons of The evidence also establishes that, regardless which of Complaint Counsel=s many JEDEC disclosure theories are considered, Rambus did not at any pertinent time possess patents or patent applications that it would have been required to disclose. In other words, Rambus in fact complied with even the most tortured construction of JEDEC=s disclosure policy.

In sum, the record evidence establishes that JEDEC had no policy regarding the disclosure of patents and/or patent applications with which Rambus did not comply. It further establishes that Rambus acted in a manner fully consistent with the expectations of JEDEC and its members and fully consistent with any duty of good faith to which it might be held. The evidence also proves that JEDEC and its members were well aware that Rambus was seeking the broadest possible patent protection for its inventions and that it would be seeking protection for the four features at issue here, as well as for many other aspects of its inventions.

One might ask, then, if in fact JEDEC and its members were aware of the possibility that Rambus would obtain patent claims that would cover, among other inventions, the four features at issue here, why did JEDEC, at the behest of some of its members with the greatest knowledge and the most at stake, include these features in JEDEC=s standards? The evidence provides two answers to this question. The first is that JEDEC members believed that any Rambus patents that issued would be invalid or very narrow because of prior art, *e.g.*, that the Patent Office and/or the courts would recognize

that Drs. Farmwald and Horowitz had not invented revolutionary technology or new ways

Horowitz and use an ever-increasing number of the inventions they made. The four features at issue here were utilized by the DRAM industry because they had to be; without them DRAMs could not keep up with the ever-increasing speed and data demands of microprocessors.

Complaint Counsel also have failed to prove two other elements of their claims. First, Complaint Counsel undertook to prove that Rambus engaged in Aexclusionary conduct,@which is defined by the case law (and the Federal Trade Commission) as conduct that makes no economic sense but for the elimination of competition and, therefore, has no legitimate business justification. However, it is uncontested that there are legitimate business reasons for technology-based companies like Rambus to maintain the confidentiality of information regarding their patent applications and pending patent claims. Rambus=s alleged refusal to disclose information about its intellectual property aspirations thus had a legitimate business purpose and cannot be the basis for a monopolization claim.

Second, Complaint Counsel are required to show economic injury or anticompetitive effects in order to prevail on their claims. Yet, the evidence in this case establishes there were no anticompetitive effects and in the future there will be no anticompetitive effects as the result of any conduct by Rambus. In all pertinent respects, the **A**A

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prove, that JEDEC had available to it acceptable noninfringing alternative technologies at the time that Rambus supposedly should have disclosed its patent interests. However, Complaint Counsel made no effort to prove that the supposed **A**alternatives@did not themselves infringe Rambus=s patents (or the patents of others). Complaint Counsel also failed to prove that any of the supposed alternatives were superior to Rambus=s inventions in terms of performance and/or cost (even accounting for Rambus=s royalties). It also is clear that there has been and will be no economic injury because the royalties that Rambus is charging today for the use of its patented inventions are the same royalties that it would have charged in Complaint Counsel=s hypothetical **A**but for@world. Moreover, the royalty rates Rambus charges are consistent with the JEDEC **A**reasonable and nondiscriminatory@standard.

For all of these reasons, as discussed further below and as set forth in detail in Rambus=s Proposed Findings, this Court should find that Complaint Counsel have not met their burden of proof and should, accordingly, dismiss the Complaint.

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predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power.@ *Spectrum Sports v. McQuillan*, 506 U.S. 447, 456 (1993).

Under either theory, Complaint Counsel must, at a minimum, prove that Rambus (a) engaged in anticompetitive conduct and (b) that this conduct, as opposed to the superiority of its patented technology, led to the acquisition of or dangerous probability of gaining monopoly power, *i.e.*, the ability to raise prices by restricting output. See, e.g., PepsiCo, Inc. v. Coca-Cola Co., 315 F.3d 101, 107 (2d Cir. 2002) (Amarket power is defined as the ability to raise price by restricting output=). This means that Complaint Counsel must prove that Rambus engaged in anticompetitive conduct that caused or threatens to cause anticompetitive harm. See, e.g., Dickson v. Microsoft Corp., 309 F.3d 193, 211 (4th Cir. 2002) (AThe offense of monopolization requires a showing of >anticompetitive effect.=@); United States v. Microsoft Corp., 253 F.3d 34, 58 (D.C. Cir. 2001) (Ato be condemned as exclusionary, a monopolist-s act must have an >anticompetitive effect=.... the plaintiff, on whom the burden of proof of course rests must demonstrate that the monopolist-s conduct indeed has the requisite anticompetitive effect@(internal citations omitted)); Taylor Publ=g Co. v. Jostens, Inc., 216 F.3d 465, 474 (5th Cir. 2000) (in attempted monopolization case, court looks at threatened effects Ain light of the state of the market<sup>(a)</sup>. In other words, Complaint Counsel must prove not only that Rambus=s conduct was Aanticompetitive@(a term with a particular meaning defined

below), but that the conduct caused or threatens to cause some increase in price, restriction in output, or diminishment of quality in some relevant market. *See, e.g., Big Bear Lodging Ass=n v. Snow Summit, Inc.*, 182 F.3d 1096, 1104 (9th Cir. 1999) (AMonopolization claims can only be evaluated with reference to properly defined geographic and product markets.@); *Concord v. Boston Edison Co.*, 915 F.2d 17, 22 (1st Cir. 1990) (monopolization only occurs where conduct Aobstruct[ed] the achievement of competition=s basic goals **B** lower prices, better products, and more efficient production methods@).

#### B. Complaint Counsel=s Burden Of Proof

The courts have long recognized an inherent tension between the patent and antitrust laws. Pursuant to Article 1 of the Constitution, a patent confers a legal monopoly for a limited period of time. In return for a patent, the patentee must fully disclose the patented invention or process, and after the expiration of the statutory period, the patentee loses all exclusive rights to the invention. *See generally Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480-81 (1974). As the Federal Circuit has explained, this  $\approx$  a t on of g 96 Tff 0 DTccTvr (); ) Tjc 11. 16 0 T0 /4Lote 0t con xof ot here 200 Tw Precisely because a patent constitutes a monopoly (albeit a lawful one), a patentee who attempts to enforce a patent is often faced with threats of antitrust liability. Most commonly, the defendant accuses the patentee of obtaining market power improperly by withholding material information from the patent office in the course of obtaining the patent. Such claims are called *AWalker Process*@claims, after the Supreme Court=s decision in *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*, 382 U.S. 172 (1965), which allowed the fraudulent procurement of a patent to form the basis for an antitrust claim under certain circumstances.

The courts have consistently required parties asserting *Walker Process* claims to prove the elements of fraud with **A**clear and convincing@evidence. *See, e.g., Loctite Corp.*, 781 F.2d at 876-022 Twfzd2781 F.2dc(781) e cyave code) so not spro because a man thi between the patent and antitrust laws **A**has been achieved by erecting certain barriers to antitrust suits against a patentee attempting to enforce its patent@.

As Complaint Counsel will be quick to point out, this is not a private antitrust suit brought in federal court, and the Administrative Procedure Act has been held to require that an administrative agency need satisfy only a preponderance of the evidence burden in most agency proceedings. See Steadman v. SEC, 450 U.S. 91, 95 (1981). The Federal Trade Commission, however, has acknowledged the tension between the interests served by the patent and antitrust laws and has expressly adopted the Aclear and convincing@standard of proof in Section 5 cases based on the allegedly fraudulent procurement of a patent. As early as the 1960-s, in the American Cyanamid cases, the Commission observed that A[w]here fraud in the procurement of a patent has been alleged in infringement suits and cancellation proceedings, the courts have stated that it must be established by clear and convincing evidence that the false or misleading statement was made (or information was withheld) deliberately and with intent to deceive. Also, of course, the information that is misrepresented or withheld must be material.@ In the Matter of American Cyanamid Co., 63 F.T.C. 1747, 1963 FTC Lexis 77 at \*224-5. Upon remand from the Sixth Circuit, the Commission again employed the Aclear and convincing@standard in finding that American Cyanamid and Pfizer had committed fraud upon the patent office. See In the Matter of American Cyanamid Co., 72 F.T.C. 623, 1967 FTC Lexis 43 at \*138-\*145.

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More recently, in

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organizations in today=s high-tech economy. The risks associated with participation in standards-setting must not be so great that innovators are deterred from participating by

burden of proving the essential elements of their claims, including Amateriality, intent and

patent disclosure policy. Complaint at **&&** 2, 47-55, 70-80. According to the Complaint, had Rambus made the allegedly necessary disclosures, JEDEC could have adopted alternative technologies and avoided Rambus=s patented technologies. Complaint at **&&** 62, 65, 69. These allegations raise three fundamental issues: (1) whether the JEDEC disclosure duty is as broad and comprehensive as alleged in the Complaint; (2) whether Rambus actually violated any such duty to disclose imposed by JEDEC rules; and (3) whether the alleged failure to disclose was material and caused the competitive injury alleged in the Complaint.

*See* Opinion Supporting Order Denying Motion by Mitsubishi to Quash or Narrow Subpoena, filed November 18, 2002, at 4 (emphasis added).

Most recently, in their Opening Statement, Complaint Counsel confirmed that their claims are fundamentally founded on the allegation that Rambus concealed **A**information **B** in violation of JEDEC=s own operating rules and procedures.@ (CC=s Opening, Tr. 9; *accord*, Tr. 13).

Legally, if Complaint Counsel cannot prove that Rambus had a duty to disclose information to JEDEC that it did not disclose, Complaint Counsel=s claims must fail. *See* subsections B & C below. Factually, this also is true. Indeed, it is undisputed. As Complaint Counsel=s economic expert conceded, if Rambus did not have a duty to disclose its intellectual property (or hoped-for intellectual property) covering a particular technology, then he could form no opinion that Rambus=s failure to make such a disclosure was exclusionary conduct. RPF 1476-1485; (McAfee, Tr. 7546). Further, if Rambus had never joined JEDEC, and thus had never had any JEDEC rules imposed on it, its failure to disclose could not be exclusionary and no claim could be asserted against it. *Id.*; (McAfee, Tr. 7689).

 B. Complaint Counsel Must Prove That Rambus Knowingly And Intentionally Breached A Duty To Disclose In Order To Mislead JEDEC

To prevail on their monopolization claim, Complaint Counsel must prove that Rambus **A**willfully acquired or maintained this monopoly power by anticompetitive conduct.<sup>@</sup> *Concord Boat*, 207 F.3d at 1060. That is, Complaint Counsel must prove that Rambus intentionally engaged in anticompetitive conduct. *See, e.g., United States Football League v. National Football League*, 842 F.2d 1335, 1359 (2d Cir. 1988) (**A**The willfulness element certainly requires proof of intent.<sup>@</sup>). To prevail on their attempted monopolization claim, Complaint Counsel must prove that Rambus engaged in exclusionary conduct with **A**a specific intent to monopolize.<sup>@</sup> *Spectrum Sports*, 506 U.S. at 456. Importantly, the intent necessary to support either of Complaint Counsel<sub>-</sub>s claims **B** an intent to gain monopoly through anticompetitive conduct **B** must be distinguished from an intent to achieve market position through lawful competition:

> The Aintent<sup>®</sup> to achieve or maintain a monopoly is no more unlawful than the possession of a monopoly. Indeed, the goal of any profit-maximizing firm is to obtain a monopoly by capturing an ever increasing share of the market. Virtually all business behavior is designed to enable firms to raise their prices above the level that would exist in a perfectly competitive market. Economic rent **B** the profit earned in

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excess of the return a perfectly competitive market would yield **B** provides the incentive for firms to engage in and assume the risk of business activity. Monopolies achieved through superior skill are no less intentional than those achieved by anticompetitive means . . . . so the intent relevant to a ' 2 Sherman Act claim is only the intent to maintain or achieve monopoly power by *anti-competitive means*.

Illinois, ex rel. Burris v. Panhandle E. Pipe Line Co., 935 F.2d 1469, 1481 (7th Cir. 1991) (emphasis original).

In this case, therefore, it is not enough for Complaint Counsel to show that Rambus sought to obtain patents for its inventions that were being incorporated into the JEDEC standards; as discussed above, the patent laws gave Rambus that right. By the same token, biting comments about preparing a patent minefield, directing claims at standards, or hoping that others infringe Rambus patents, absent more, do not show an anticompetitive intent. See, e.g., Advo, Inc. v. Philadelphia Newspapers, 51 F.3d 1191, 1199 (3d Cir. 1995) (affirming summary judgment on attempted monopolization claim where plaintiff=s attempt to Acut and paste@unrelated quotes from defendant=s documents containing Acolorful, vigorous hyperbole@B including statements that when defendant saw Athe competition drowning@it would Astick a water hose down their throats@B failed to prove specific intent to monopolize); Ocean State Physicians Health Plan, Inc. v. Blue Cross & Blue Shield, 883 F.2d 1101, 1113 (1st Cir. 1989) (evidence of an intent to Acrush@a competitor does not show anticompetitive intent). This type of evidence, without more, simply shows that Rambus sought to gain a competitive advantage through

lawful means, by ensuring that the inventions disclosed in the original Farmwald-Horowitz application were properly claimed.

Here, the anticompetitive conduct alleged by Complaint Counsel is that Rambus intentionally sought to mislead JEDEC. Complaint Counsel must therefore prove that Rambus intended through its actions or omissions to mislead JEDEC by knowingly violating a JEDEC disclosure rule. *Cf. Pence v. United States*, 316 U.S. 332, 337 (1942) (for federal common law fraud claim, plaintiff must show that representation was made with knowledge of its falsity and with intent to deceive); indicating that it would not enforce its patents, and it conformed its conduct to that advice. Further, and most importantly, the evidence at trial confirmed what the Federal Circuit also concluded: Rambus did not breach any JEDEC duty to disclose because it never had any patent or patent application that was required to be disclosed.

C. As A Matter Of Law, Complaint Counsel Must Prove That Rambus Willfully Violated A JEDEC Rule In Order To Establish An Antitrust Violation

Although it now appears that Complaint Counsel may concede that, in order to prevail, they must prove Rambus violated JEDEC disclosure rules **B** especially since that is the testimony of their economics expert **B** statements made by Complaint Counsel in their opening statement and elsewhere suggest that Complaint Counsel may still hope to prove an antitrust violation on the basis of conduct that is contrary to the **A**spirit@or intent of JEDEC=s **A**open standards@process. Such an effort to establish an antitrust violation without showing that Rambus violated a clearly stated duty owed to JEDEC would necessarily fail as a matter of law, as well as a matter of fact.

Because of the relative novelty of imposing antitrust liability for nondisclosure in private standard-setting, there is virtually no case law elucidating precisely what constitutes anticompetitive conduct in that context. One line of cases involving the imposition of antitrust liability for nondisclosure springs from the Supreme Court-s decision in *Walker Process*. There, the Supreme Court held that the procurement of a patent by fraud on the Patent Office is anticompetitive conduct that may be the basis of an action under Section 2 of the Sherman Act, provided that the other elements of a Sherman Act claim are present. *Id.* 382 U.S. at 177.

Because of the onerous nature of antitrust liability, the federal courts have held that a showing of nothing less than **A**common law fraud [is] needed to support a

The evidence also shows that the ultimate goal of the JEDEC patent policy was that those patents that did affect standards be made available to all potential licensees on reasonable terms. Indeed, several JEDEC members understood that, as long as a company licensed its patents on RAND terms after they issued, there was no need to disclose anything at all.

Although the substantial weight of the evidence supports these conclusions, not all of the evidence does. There is some contrary evidence, in the form of testimony by certain interested individuals, as to what the JEDEC policy was. One of the Court<del>s</del> challenges thus will be to decide what weight to give various pieces of evidence. The legal and common sense principles to be applied in weighing the evidence on these and other issues are discussed below. That preliminary discussion is followed by a discussion of the evidence relating to the JEDEC patent policy.

## 2. Principles That Guide Weighing The Evidence

Rambus has consistently urged this Court, in considering whether JEDEC members took on some disclosure obligation and, if so, what the metes and bounds of that disclosure obligation were, to look to contemporaneous evidence **B** what JEDEC members said, wrote and did during the time period from early 1992 to mid-1996. For many reasons, such contemporaneous evidence, rather than retrospective testimony **B** Athis is what I recall we did back then@B has much greater evidentiary value. First, it is less subject to the vagaries of imperfect memory. Second, it is less subject to being influenced

by the current state of affairs. As an example, if JEDEC=s policies or the manner in which they are described are different today from what they were during the pertinent time period, it might be difficult to remember clearly what the policies were. Third, the interests, biases and points of view of many of the witnesses who testified are quite strong, and particularly with regard to those witnesses, their recent testimony should be viewed skeptically, especially when it conflicts with contemporaneous evidence. For these reasons, this Court should give much greater weight to the contemporaneous evidence than to conflicting oral testimony.

The courts that have considered this same question **B** how to weigh contemporaneous evidence against conflicting recent testimony **B** have reached the same conclusion that Rambus urges this Court to reach. In fact, courts have frequently observed that **A**as a general rule, oral testimony in conflict with contemporaneous documentary evidence deserves little weight.*@ Beddingfield v. Sec=y of HHS*, 50 Fed. Cl. A respondent=s witnesses testified at trial that a company it had acquired faced imminent bankruptcy at the time of the acquisition. Contemporaneous documents, however, Areflect[ed] confidence and optimism about [the company=s] future market opportunities in the United States....@ For all of these reasons, this Court should give little if any weight to recent

testimony that conflicts with contemporaneous evidence.

3. The Governing Manuals And Policies Did Not Require Disclosure Of Intellectual Property Interests<sup>4</sup>

regard to whether their proposal or adoption may in any way involve patents on articles, materials, or processes.*<sup>a</sup> Id*. The EIA Legal Guides do not contain any reference to any disclosure obligation in connection with a member<del>-</del>s intellectual property interests. RPF 112-115, 129-32.

During the time when Rambus was a JEDEC member, there were three

other EIA manuals in effect, EP-3-F, EP-7-A and EP-7-B. None of these manuals makes

any explicit reference to an obligation on the part of the EIA members or others to

disclose patents or patent applications. EP-3-F provides simply that:

ANo program of standardization shall refer to a product of which there is a known patent unless all the technical information covered by the patent is known to the formulating committee, subcommittee or working group. The Committee Chairman must also have received a -15.36 TD -0.00 TD 0 Tc (7) Tj 6.48 0 TD 0 0 0 0 (2) A license should be made available to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination.@

(JX 54 at 9-10).

The language in these two manuals does not require disclosure of intellectual property interests by anyone. Instead, it describes the approach to be followed if the standard is covered by a known patent. At most, this language can be read to suggest that disclosure of patents is encouraged and that, if an essential patent is disclosed, JEDEC should take steps to ensure that it will be available on RAND terms. Had the EIA intended to require the disclosure of patents, it is reasonable to assume it would have said so **B** it would have used mandatory language **B** but it did not. It is also reasonable to assume that, if the EIA had intended any disclosure obligation to extend to patent applications, it would have used those words, rather than referring just to patents. RPF 133-40. Indeed, the Chairman of the JC 42.3 subcommittee, Gordon Kelley, testified that he understood throughout the early and mid-1990's that the EIA manuals did *not* require the disclosure of patent applications. (Kelley, Tr. 2686-7, 2695-7).

In understanding what EIA=s rules required, it also is instructive to look at the American National Standards Institute (AANSI@) Patent Policy. ANSI was and is an umbrella organization that accredits various standards-setting organizations, including the EIA. ANSI published AGuidelines@regarding its Patent Policy. These ANSI Patent Policy Guidelines were circulated to JC 42 members on at least two separate occasions while Rambus was a JEDEC member. RPF

any disclosure requirement or expectation with respect to patent applications. (RX 669 at 2-3).

The EIA-s January 1996 letter to the FTC was submitted on behalf of the

EIA and its unincorporated divisions and departments, including JEDEC. RPF 149. The

letter was approved by and signed on behalf of Mr. John Kelly, the EIA General Counsel,

as well as on behalf of Mr. Dan Bart, Vice President for Standards and Technology for

EIA and TIA=s outside counsel. RPF 150.

The FTC clearly understood that the EIA/JEDEC patent policy, as it existed

in early 1996, did not require the disclosure of intellectual property. In July of that year,

FTC Secretary Donald Clark responded to EIA=s January 1996 letter and wrote that:

**A**EIA and TIA, following ANSI procedures, encourage the early, voluntary disclosure of patents, but do not require a certification by participating companies regarding a potentially conflicting patent interest.@

(RX 740 at 1).

The words used by the EIA=s top legal officer and its Vice President in charge of standards, and the words used by FTC Secretary Clark, were clear and unambiguous. AVoluntary@does not mean Arequired.@ It means, as Webster=s Third New

done or any such obligation that can accrue from the existing state of affairs. . . .@ Webster=s Third New International Dictionary Unabridged (1986), p. 2564.<sup>5</sup>

No further evidence should be necessary to establish that, when Rambus was a JEDEC member, the disclosure of patents was encouraged, but not required, that it was voluntary, not mandatory, and that it was limited to patents, not patent applications. RPF 128-56, 205-17. There is, however, more such evidence. We need only look to the July 10, 1996 memorandum from JEDEC Secretary Kenneth McGhee, which was sent to all AJEDEC Council Members and Alternates@in regard to the FTC=s Final Consent Order in the *Dell* case. In that memorandum, which was dated the same day as FTC Secretary Clark=s letter to the EIA, Secretary McGhee stated that:

**A**ANSI and EIA do however, encourage early, voluntary disclosure of any known essential patents.@

(RX 742 at 1).

<sup>&</sup>lt;sup>5</sup> The EIA had selected Websters Third New International Dictionary as its official reference guide in 1990. (JX 54 at 3).

Complaint Counsel have in the past pointed to the JEDEC manuals, rather than the EIA manuals, in the hope of finding some contemporaneous written evidence to support their position that disclosure was mandatory. JEDEC Manual 21-H, which was in effect when Rambus joined JEDEC in 1992, provides no support for Complaint Counsel=s position. It provides only that AJEDEC standards are adopted without regard to whether or not their adoption may involve patents on articles, materials or processes.@ (CX 205A). The 21-H manual makes no other reference to intellectual property.<sup>6</sup> RPF 160-61.

The only contemporaneous documentary evidence from JEDEC to which Complaint Counsel can point is JEDEC manual 21-I, which bears an October 1993 publication date. In language that Complaint Counsel have cited repeatedly, manual 21-I refers to an obligation on the part of committee chairpersons to **A**call attention to the obligation of all participants to inform the meeting of any knowledge they may have of any patents, or pending patents, that might be involved in the work they are undertaking.@ (CX 208 at 19). Although this language appears to conflict with the language in the

<sup>&</sup>lt;sup>6</sup> Similarly, when Rambus filled out an application to join JEDEC, that application form said nothing about intellectual property or about its disclosure by or to JEDEC members. (CX 601).

governing EIA manuals, with the 1996 correspondence exchanged by the EIA and FTC, and with Secretary McGhee=s July 1996 explanation of the JEDEC patent policy, this apparent conflict is readily reconciled.

It is undisputed that JEDEC Manual 21-I was not effective until and unless it was approved by EIA=s Engineering Department Executive Council (AEDEC@). As John Kelly, EIA=s General Counsel, testified:

- AQ. The JEDEC manual 21-I, it needed a final stamp of approval from EDEC, correct?
- A. I believe at the time that was correct, yes, sir, in 1993.@

(Kelly, Tr. 2105). Mr. Kelly also testified that he did not know one way or the other if manual 21-I had ever received the necessary EDEC approval and that he had not intended, in response to questions from Complaint Counsel, to testify that 21-I had been approved by EDEC.

Counsel thus did not meet their burden to show the 21-I manual, or the language upon which they repeatedly rely, was ever in effect. RPF 163-70.

Subsequent events make clear that manual 21-I was, in fact, never in effect.

was encouraged and voluntary, not required and mandatory. Moreover, when this language was first added to the ballots in 1989, there was a discussion in a JEDEC meeting of the purpose of the new ballot language. That discussion is reflected in the JC 42.1 minutes for the meeting held on September 13, 1989. The minutes state:

4-15. 36. 0026 T047 was encord the n

alert the Committee@to mean that a member **A**must@alert the Committee. Rhoden=s interpretation is a strained construction of the language itself. When considered in light of the JEDEC meeting minutes quoted above, the testimony stretches the language past the breaking point. It is simply not credible to read the meeting minutes or the ballot language itself as consistent with a mandatory duty of disclosure.

> 5. There Is Other Contemporaneous Written Evidence To Support The Conclusion That JEDEC Encouraged But Did Not Require The Disclosure Of Patents And That Its Members Had No Expectation Regarding The Disclosure Of Patent Applications<sup>9</sup>

In March 1994, after manual 21-I had been published, JEDEC Secretary

Ken McGhee sent a memorandum to JC 42 Chairman Jim Townsend that stated that JEDEC=s Alegal counsel@had said that Ahe didn=t think it was a good idea to require people at JEDEC standards meetings to sign a document assuring anything about their company=s patent rights. . . .@ (RX 486 at 1). Secretary McGhee=s memorandum communicates the various reasons that legal counsel had given to Mr. McGhee as to why JEDEC representatives should not be required to sign an assurance regarding their company=s patent rights:

- **A**(1) It would have a chilling effect at future meeting.
- (2) The general assurance wouldn $\neq$  be worth that much anyway.

<sup>&</sup>lt;sup>9</sup> This section corresponds generally to RPF 186-98.

## (3) It needs to come f

These statements make plain that patents, not applications, are the subject of JEDEC=s patent policy, and that disclosure was voluntary, not mandatory.

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positions. Instead, the position was accepted, presumably because it was consistent with JEDEC=s rules and with the expectations of JEDEC members.

In this same vein, on two occasions in 1992 and 1995, Rambus declined to comment at a JEDEC meeting when asked about its intellectual property. On neither occasion did JEDEC leaders, staff or members inform Rambus that disclosure was mandatory, rather than voluntary, or that the fact that it had declined to comment was a violation of JEDEC rules, policies or practices. RPF 198.

Finally, there is evidence that numerous patents and patent applications relating to JEDEC standards were not disclosed to JEDEC, even when named inventors were in the room when the proposed standard was being discussed. RPF 239-73. Although one might explain a few instances of non-disclosure as the result of inadvertence, or perhaps even as the result of a deliberate desire to evade JEDEC policy, the extent of such non-disclosures as revealed by the record evidence does not lend itself to such explanations. It is consistent only with the conclusion that JEDEC members understood that the disclosure of patent applications was not required and that the disclosure of patents was encouraged, but not mandatory.<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> As just one example, Gordon Kelley, the JEDEC representative from IBM who served as the Chair of the JC 42.3 committee in the early and mid-1990's, testified that he did not disclose IBM patents relating to Atoggle mode@in 1990 in part because IBM was Aprepared to meet the requirements of the JEDEC committee@to license the patents on reasonable and nondiscriminatory terms. (Kelley, Tr. 200). If Mr. Kelley=s testimony is to be taken at face value, there was then no obligation to disclose even patents, at least in his mind, as long as the patent holder ultimately licensed its essential patents on RAND terms.

7. In Sum, No Contemporaneous Evidence Supports Complaint
Counsel=s Position That Rambus Was Obligated To Disclose
Its Patent Applications Or Its Intentions And Beliefs
Regarding Its Patent Applications To JEDEC

With the exception of the language of JEDEC manual 21-I, there is no contemporaneous written evidence that suggests that JEDEC members were required or expected to disclose patent applications to JEDEC. The conduct of JEDEC members also demonstrates that they did not believe that they were required or expected to disclose patent applications or an intention to file or amend patent applications. The product built in compliance with the standard. Numerous witnesses so testified. RPF 280-85.<sup>14</sup>

<sup>&</sup>lt;sup>14</sup> For example, JC 42.3 subcommittee chair Gordon Kelley testified that the disclosure duty was triggered by a patent claim that **A**reads on or applies@to the standard, meaning that **A**if you exercise the design or the production of the component that was being standardized [it] would require use of the patent.@ (Kelley, Tr. 2706Kelleys 0 TD /8,do.2 0 4fthat fs0469 T70 -12f 0.048 T9 To

Second, if such an overbroad standard were applied, JEDEC would spend inordinate amounts of time trying to sort through the disclosed patents to determine whether the technology under consideration for standardization was, in fact, covered by a patent. This would make JEDEC=s job even more difficult, and would slow down a process that many witnesses testified was already too slow. RPF 288-295; (RX 2011 at 4-6). *Accord*, David J. Teece & Edward F. Sherry, *Standard Setting and Antitrust*, 87 MINN. L. REV. 1913, 1948-49 (2003).

<u>Third</u>, if the purpose of disclosure was to enable JEDEC to decide whether to include patented technology in a standard, an overbroad disclosure obligation likely would result in JEDEC not standardizing the Abest@technology because of a mistaken view that it might be patented.<sup>15</sup>

<u>Finally</u>, if the standard were something other than Aessential@patents, then very valuable property rights **B** the right to enforce a patent against infringers **B** could be

<sup>&</sup>lt;sup>15</sup> For the same reason **B** to avoid inaccurate and overly broad disclosures **B** many witnesses testified that any disclosure obligation was or should be limited to the **A**actual knowledge@of the JEDEC representatives. (*See, e.g.*, Kelly, Tr. 1970, 2171-2).

lost due to Aafter-the-fact morphing of a vague, loosely defined policy.@ Infineon,

whether to include patented technology in a standard **B** would best be served by a disclosure at the time of balloting. Otherwise, there would be many more disclosures than actually required, and JEDEC would spend significant amounts of time considering **B** or trying to avoid **B** patents that might not apply to the standard as it is ultimately balloted for approval. This would be inefficient and would slow even further an already-slow process.

## E. Complaint Counsel Describe A APatent Policy@That Is Too Indefinite To Be Enforced

Assuming the existence of some duty to disclose patents or patent

applications to JEDEC, the failure to comply with this supposed duty will not support an *antitrust* claim unless the duty was clear and unambiguous. The Federal Circuit explained that a duty of disclosure must be clear and unambiguous if it is to support a fraud claim:

When direct competitors participate in an open standards committee, their work necessitates a written patent policy with clear guidance on the committee=s intellectual property position. A policy that does not define clearly what, when, how, and to whom the members must disclose does not provide a firm basis for the disclosure duty necessary for a fraud verdict.

*Infineon*, 318 F.3d at 1102. This same logic applies to Complaint Counsel=s antitrust claim, which is based on an alleged violation of JEDEC=s patent policy; it would be

basis for antitrust liability. See, e.g., Concord v. Boston Edison Co., 915 F.2d 17, 22 (1st

fact so requires.<sup>@</sup> Infineon, 318 F.3d at 1102. This is especially true because testimony about Aexpectations<sup>@</sup> is subject to Aafter-

nothing to do with *intentions* to file patent applications. A policy of encouragement, rather than coercion, is fully consistent with JEDEC members=legitimate business reasons for keeping patent applications confidential, as discussed further below.

Second, Complaint Counsel have failed to prove that the patent policy was so broad as to require the disclosure of patents, or applications that even if they issued as patents, were not required to be licensed in order to practice the standard. In other words, Complaint Counsel have failed to prove that any duty of disclosure extended beyond Aessential@patents. Such broader duty would, in any event, make no sense and be impossible to apply. As the Federal Circuit explained, any rule that required disclosure of patent claims that were not necessary or essential in order to practice the standard would be nonsense:

> To hold otherwise would . . . render the JEDEC disclosure duty unbounded. Under such an amorphous duty, any patent 30.72 TD 0.00nyhri hold oth ho vaguehe lat evehipice ard

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The JEDEC policy, though vague, does not create a duty premised on subjective beliefs. JEDEC=s disclosure duty erects an objective standard. It does not depend on a member=s subjective belief that its patents do or do not read on the proposed standard. Otherwise the standard would exempt a member from disclosure, if it truly, but unreasonably, believes its claims do not cover the standard. As discussed above, the JEDEC test in fact depends on whether claims reasonably might read on the standard. *A member=s subjective beliefs, hopes, and desires are irrelevant.* Hence, Rambus=s mistaken belief that it had pending claims covering the standard does not substitute for the proof required by the objective patent policy.

Infineon,

technologies standardized by JEDEC, and (3) that were held by members that were not presenting their technologies for standardization.

F. Rambus Did Not Possess Any Intellectual Property During The Time It Was A JEDEC Member That It Was Obligated To Disclose

It may be most useful to break down the discussion of whether Rambus had

any intellectual property during the time it was a JEDEC member that it was obligated to

disclose to JEDEC into two parts.<sup>17</sup> The first part will address whether Rambus had any

patents that it was required to disclose, and the second part will address whether it had

any patent applications required to be disclosed.

1. Rambus Did Not Have Any Undisclosed Patents During The Time It Was A JEDEC Member That It Should Have Disclosed<sup>18</sup>

<sup>18</sup> This section corresponds generally to RPF 327-59 and the factual support for the arguments in this section is set forth there in detail.

<sup>&</sup>lt;sup>17</sup> It will, of course, be much easier to address Complaint Counsel=s theory when they finally set it forth. To date, the only constancy to Complaint Counsel=s theory of JEDEC=s patent policy is that it always is changing and morphing.

The parties have stipulated that as of January 1996, Rambus had no U.S. patents that were essential to the manufacture or use of any JEDEC-compliant device. Thus, the only patents potentially in issue are those that issued after January 1996 but before Rambus formalized its withdrawal.<sup>19</sup> Narrowing the universe even further,

<sup>&</sup>lt;sup>19</sup> A preliminary question is whether Rambus had any obligation to disclose intellectual property after it stopped attending JEDEC meetings, but before it formalized its withdrawal. Complaint Counsel have failed to show that it did have any such obligation. Rambus paid dues only through 1995. After that, it was no longer a JEDEC member in good standing and it should not have been accorded the rights and privileges, or the obligations, of membership. Complaint Counsel have failed to show that there was any policy or practice of allowing companies to

Complaint Counsel contend only that Rambus should have disclosed U.S. Patent 5,513,327 (Athe =327 patent@), which issued on April 30, 1996.

There are several reasons why this patent was not required to be disclosed. First, disclosure of patents was not required, as demonstrated earlier. Second, Rambus ceased to attend JEDEC meetings and had no representative in attendance after December 1995; even if there was some duty to disclose, that duty was not imposed on companies who were not in attendance. Third, any disclosure duty depended on the actual knowledge of a company=s JEDEC representative that the company=s patent related to the work of JEDEC, and Complaint Counsel have failed to show that Richard Crisp had any actual knowledge that the =327 patent was related to the work of JEDEC. Fourth, there

continue as members if they failed to pay their dues. Further, even if Rambus did continue to have rights as a member despite not paying its 1996 dues, what was it supposed to disclose when it did not have a representative in attendance at the meetings? Since its disclosure obligation was limited to the actual knowledge of its JEDEC representatives at the meeting, and since it had no representatives in attendance, it had no knowledge that would have given rise to a disclosure obligation.

were no alleged Atriggering events@after the =327 patent issued. Fifth, the events that Complaint Counsel contend Atriggered@a duty to disclose the =327 patent, and which did occur before the patent issued, were merely discussions, not ballot proposals, and thus no disclosure of patents Arelated@to those discussions was required. Finally, if discussions occurring prior to the issuance of the =327 patent could, theoretically, have created a disclosure obligation when the patent later issued, the relationship between the =327 patent and the topics discussed at JEDEC meetings was so attenuated that no disclosure obligation would have arisen in any event; certainly the =327 patent could not be said to Aread on@or be Aessential to@any of the technologies discussed.

Complaint Counsel allege that disclosure of the =327 patent was required because claims 1 and 7 of the patent purportedly would have covered a JEDEC-compliant SDRAM that also incorporated certain dual-edge clocking proposals made at JEDEC.<sup>20</sup> Specifically, Complaint Counsel allege that Rambus=s duty to disclose the =327 patent was triggered by three presentations at JEDEC: (1) a presentation by William Hardell of IBM contained in the May 1992 minutes of the JEDEC 42.3 subcommittee (the **A**Hardell presentation@), (2) a **A**Future SDRAM Features Survey Ballot contained in the December 1995 minutes of the JEDEC 42.3 subcommittee (the **A**Survey Ballot@), and (3) a

<sup>&</sup>lt;sup>20</sup> Complaint Counsel also introduced testimony that claims 1 and 7 read on products built to the DDR SDRAM standard, but have failed to explain how this would trigger a disclosure duty on the part of Rambus, which left JEDEC over three years before the DDR SDRAM standard was first published.

presentation by Samsung entitled **A**Future SDRAM,@contained in the March 1996 minutes of the JEDEC 42.3 subcommittee (the **A**Samsung presentation@).<sup>21</sup> RPF 328.

As noted above, none of these three presentations ever rose to the level of a balloted proposal. Further, all three presentations were made before the =327 patent issued, so that Rambus could not have disclosed the =327 patent at the time of these presentations in any event. RPF 329. In any event, as demonstrated below, claims 1 and 7 of the =

<sup>&</sup>lt;sup>21</sup> In support of these allegations, Complaint Counsel rely solely on the testimony of their technical expert, Professor Jacob. Professor Jacob has no patents to his name and has never previously done any such claims analysis. Although in other instances, discussed below, Complaint Counsel introduced testimony from *both* Professor Jacob and their patent expert, Mr. Nusbaum, here they rely only on Professor Jacob. For whatever reason, Mr. Nusbaum did *not* testify whether in his opinion the claims of the =327 patent related to JEDEC work.

2. Rambus Did Not Have Any Undisclosed Patent Applications During The Time It Was A JEDEC Member That It Should Have Disclosed<sup>23</sup>

The parties have stipulated that prior to the adoption of the JEDEC

SDRAM standard in 1993, Rambus had no claims in any pending patent applications that,

if issued, would necessarily have been infringed by the manufacture or use of any

SDRAM device manufactured in accordance with the 1993 JEDEC SDRAM standard.

RPF 361. Yet, Complaint Counsel contend that (a) Rambus had claims in patent

applications that were filed after the 1993 SDRAM standard that

circumstances were patent applications required to be disclosed. Second, Rambus=s disclosure obligation was limited by Mr. Crisp=s actual knowledge, and there is no evidence that he had actual knowledge of the specific claims in any of the patent applications that Complaint Counsel contend should have been disclosed. Third, there is not a sufficient nexus between the claims in question and the JEDEC work raised by Complaint Counsel **B** that is, the claims do not **A**read on@the presentations or standards alleged **B** to give rise to a duty to disclose. Finally, as discussed below, there are additional independent reasons that vary from application to application as to why those applications could not give rise to a duty to disclose.

# a. Applications With Claims Allegedly Reading On The SDRAM Standard

Complaint Counsel allege that Rambus had two patent applications pending during the time that it was a JEDEC member with claims that allegedly read on the

## (1) The =961 Application<sup>24</sup>

First, Complaint Counsel raise Claims 151, 159, 160, 164, 165 and 168 of

the =961 application. (Nusbaum, Tr. 1544-45; Jacob, Tr. 5507, 5523-28), which were orTa JEDEC prac

Based on this review, this court has determined that substantial evidence does not support the finding that these applications had claims that read on the SDRAM standard.

*Infineon* 318 F.3d at 1103. The Court further held that **A**claims in the =961 application were limited to the device identifier feature@which is not **A**present in the SDRAM standard.@ *Id*.

Applying settled principles of claim construction, the Federal Circuit compared the language of claims in Rambus=s patent applications to the JEDEC standard and determined that Rambus did not have **A**claims that read on the SDRAM standard@ while it attended JEDEC. *Infineon*, 318 F.3d at 1103. As the Supreme Court has explained, the Federal Circuit=s construction of the scope of a patent claim (which would include claims in patent applications) is done as a matter of law and that construction is afforded *stare decisis*.

**A**We see the importance of uniformity in the treatment of a given patent as an independent reason to allocate all issues of construction to the [Federal Circuit] .**Y** It was just for the sake of such desirable uniformity that Congress created the Court of Appeals for the Federal Circuit as an exclusive appellate court for patent cases, H.R. Rep. No. 97-312, pp. 20-23 (1981)**Y**. [T]reating interpretive issues as purely legal will promote (though it will not guarantee) intrajurisdictional certainty through the application of *stare decisis* on those questions not yet subject to interjurisdictional uniformity under the authority of the single appeals court.@

Markman v. Westview Instruments, Inc., 517 U.S. 370, 390 (1996); see also Key Pharms.

v. Hercon Labs. Corp., 161 F.3d 709, 716 (Fed. Cir. 1998) (Federal Circuit decisions on

[946564.1]

claim construction have **A**national *stare decisis* effect<sup>(a)</sup>; *Wang Laboratories, Inc. v. Oki Electric Industry Co., Ltd.*, 15 F. Supp.2d 166, 175 (D. Mass 1998) (**A**District courts are bound to follow substantive patent law as decided by the Federal Circuit.<sup>(a)</sup>). Specifically, the Federal Circuit construes the scope of patent claims as a matter of law, without deference to the district court. *See Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998). Therefore, in *Infineon*, the Federal Circuit established as a matter of law the scope of the claims of Rambus=s pending applications.

Thus, as a matter of law, this Court is bound by the Federal Circuit=s *Infineon* opinion regarding the scope of claims in Rambus=s patents and patent applications. Even if it were not so bound, however, this Court should defer on these issues to the expertise and primary jurisdiction of the Federal Circuit.

Finally, Complaint Counsel failed to prove that Rambus=s JEDEC representative, Mr. Richard Crisp, had actual knowledge of these claims, their scope and their relationship, if any, to the SDRAM standard.

(2) The =490 Application<sup>25</sup>

The only other claims that Complaint Counsel allege should have been disclosed in connection with the SDRAM standard are claims 183, 184, and 185 of the =490 application, which were added in a preliminary amendment filed on June 23, 1995.

<sup>&</sup>lt;sup>25</sup> The following discussion corresponds with RPF 366-70 and the factual support for the arguments in this section is set forth there in detail.

After a restriction requirement from the patent office, Rambus elected to pursue other claims. Claims 183, 184 and 185 were withdrawn from further consideration as of November 27, 1995. Complaint Counsel have failed to prove the existence of a duty that would require disclosure of withdrawn claims.

Furthermore, as Complaint Counsel=s patent expert testified, claims 183, 184 and 185 of the =490 application are substantially similar to the claims in the =961 application which the Federal Circuit has held do not read on SDRAMs. Indeed, as the Federal Circuit held with respect to the claims of the =961 application, claims 183-185 are all limited to Rambus=s Adevice identifier@feature because all contain the limitation that the semiconductor device outputting data (such as a DRAM) respond to requests Aspecifying the semiconductor device.@ In the =490 application (as in the 898 application to which it claimed priority), semiconductor devices are specified using the device identifier feature not found in SDRAMs. Because each and every limitation in the claims is not found in JEDEC-compliant SDRAMs, the claims do not cover those devices.

Here again, Complaint Counsel did not prove that Mr. Crisp had actual knowledge of these claims, their scope and their relationship to the SDRAM standard.

# b. Applications With Claims Allegedly Covering Certain JEDEC Presentations

There are only two other applications that Complaint Counsel allege should have been disclosed by Rambus: application serial nos. 07/847,692 (the =692 application) and 08/222,646 (the =646 application). These applications are not alleged to cover any JEDEC standard, but instead are alleged to cover certain JEDEC presentations concerning on-

the NEC presentation cannot affect the timing of anything within the memory array. Thus, the claims of the =692 application do not read on the NEC presentation.

Further, Complaint Counsel failed to provide that Mr. Crisp had actual knowledge of these claims or of any relationship between them and the NEC presentation.

#### (2) The =646 Application<sup>28</sup>

Finally, Complaint Counsel allege that Claim 151 of the =646 application triggered a duty of disclosure on Rambus=s part because it allegedly covers the same presentations raised in connection with the =327 patent: the Hardell presentation, the Survey Ballot, and the Samsung presentation.

Claim 151 of the =646 application was filed on September 6, 1994, rejected by the PTO on January 24, 1995 for, among other reasons, being indefinite, and canceled by Rambus in an amendment filed on September 14, 1995. For these reasons alone, Complaint Counsel have failed to show there was any duty to disclose this claim. Further, claim 151 was not pending at the time of any of the supposedly triggering events **B** the Hardell presentation predated the filing of claim 151 by almost three years, and the survey ballot and the Samsung patent postdated the canceling of the claim **B** and thus there were no claims to disclose in connection with those presentations. Moreover, as discussed in connection with the =327 patent, the three presentations raised by

<sup>&</sup>lt;sup>28</sup> The following discussion corresponds with RPF 379-83 and the factual support for the arguments in this section is set forth there in detail.

Complaint Counsel contain no implementation details; thus, they do not contain the implementation details that are *required* by claim 151 of the =646 application and serve to limit the scope of that claim. Claim 151 of the =646 application thus does not read on the presentations raised by Complaint Counsel.

Mr. Crisp, as noted earlier, was not shown to have had actual knowledge of claim 151 of the =646 patent, its scope or its purported relationsip to certain presentations.

G. Rambus Had No Duty To Make Any Disclosure With Respect To JEDEC= DDR SDRAM Standard Because It Formally Withdrew From JEDEC Before Work Began On That Standard<sup>29</sup>

As the Court is well aware, Rambus attended its last JEDEC meeting in December 1995 and formalized or confirmed its withdrawal from JEDEC by a June 1996 letter. JEDEC=s work on the DDR SDRAM standard did not begin until, at the earliest, the summer of 1996. In fact, the great weight of the evidence supports the conclusion that work on the DDR SDRAM standard did not begin until December 1996. As Mr. Gordon Kelley, Chairman of the JC 42.3 subcommittee, explained (and there was no contrary evidence), after a company left JEDEC it had no duty to disclose anything to JEDEC. (Kelley, Tr. 2700). Thus, Rambus had no duty to disclose any intellectual property that might relate to the DDR SDRAM standard.

There was, however, some conflicting testimony as to when work began on DDR SDRAM. In his testimony at trial, Mr. Desi Rhoden testified that work on the DDR

<sup>&</sup>lt;sup>29</sup> This section corresponds generally to RPF 397-416.

SDRAM standard began well before Rambus left JEDEC. Some other recent testimony

to the same effect also was elicited by Complaint Counsel. However, this recent

testimony was in direct conflict with contemporaneous evidence and should therefore be

given little if any weight.

For instance, in his written history of the DDR SDRAM standardization

process, written in March 1998, Mr. Rhoden said,

**A**[W]e could have finished the DDR standard sooner if only we had started earlier. Let us recap what has transpired with DDR:

1. A lot of private and independent work outside of JEDEC for most of 1996 (here is where we missed a good opportunity to start early).

2. December 96 **B** A single overview presentation of a DDR proposal at a JC 42 meeting.@

(CX 375 at 1). This written history is consistent with what Mr. Rhoden wrote earlier, in April 1997, when he said **A**DDR & SLDRAM were introduced in JEDEC in Dec 1996.<sup>@</sup> (RX 911 at 3). *See also* RPF 407-408.

An IBM presentation on DDR SDRAM similarly describes work on DDR

SDRAM as beginning in the time period from mid-June to mid-September 1996. (RX

892 at 1). The presentation also made clear that the initial work took place outside of

JEDEC and that the first DDR SDRAM showing at JEDEC was the 1996 Fujitsu

presentation. Id. A Mitsubishi chronology is to the same effect, placing private meetings

outside of JEDEC in the summer of 1996 with the first JEDEC meeting related to DDR

SDRAM occurring in December 1996. (RX 885A at 1). Rounding out the

[946564.1]

contemporaneous evidence, a July 1997 JEDEC ballot regarding the DDR SDRAM pinout stated that **A**DDR SDRAMs has been under discussion within JEDEC since September 1996.<sup>(a)</sup> (RX 967 at 1). *See also* RPF 411-413.

This Court should conclude, as the Infineon trial judge and Federal Circuit

A. Complaint Counsel Were Required To Prove That JEDEC Members Actually And Reasonably Relied On Rambus=s Silence, But Failed To Do So

Even if Complaint Counsel were able to prove that Rambus breached a duty

to disclose information to JEDEC, Complaint Counsel must still prove that JEDEC

members relied on that omission. Reliance is clearly an element of Complaint Counsel-s

monopolization claims; it is a matter of causation. Just as it would be in a fraud or patent

equitable estoppel case,<sup>30</sup> therefore, an antitrust claim based on misrepresentations or

omissions requires proof of reliance.<sup>31</sup> For example, to prove monopolization based on a

patent allegedly procured by fraud on the Patent Office, the plaintiff must make a Aclear

showing of reliance, i.e., that the patent would not have issued but for the

 $<sup>^{30}</sup>$  A plaintiff making similar allegations in support of a fraud claim would have to prove that JEDEC and it members acted in reliance on Rambus-s alleged failure to disclose. *See Alicke v. MCI Communications Corp.*, 111 F.3d 909, 912 (D.C. Cir. 1997) (federal common law); *Bank of Montreal v. Signet Bank*, 193 F.3d 818, 827 (4th Cir. 1999) (under Virginia law, fraud by omission requires a showing that the accused knew **A**the other party [was] acting upon the assumption that the [concealed] fact does not exist@) (internal quotation marks omitted). Similarly, a party asserting an equitable estoppel defense must **A**show that, in fact, it substantially relied on the misleading conduct of the patentee in connection with taking some action.@ *A.C. Aukerman Co. v. R.L. Chaides Cons. Co.*, 960 F.2d 1020, 1042-43 (Fed. Cir. 1992).

<sup>&</sup>lt;sup>31</sup> See, e.g., 2 H. HOVENKAMP, ET. AL., IP AND ANTITRUST ' 35.5, at 35-40 (2002) (stating that an antitrust plaintiff Amust establish that the standard-setting organization adopted the standard in question, and would not have done so but for the misrepresentation or omission@; 3 P. AREEDA, ET. AL., ANTITRUST LAW & 782b (2002) (antitrust allegation based on a misrepresentation Aimplicates the usual tort issues with respect to nondisclosure (when is there a duty to speak?), the distinction between fact and opinion, the knowledge or due care of the speaker, the actual degree of reliance by those allegedly deceived, and the reasonableness of any such reliance@).

misrepresentation or omission@that Acause[d] [the] PTO to grant [an] invalid patent.@

*Testing Serv.*, 108 F.3d at 1151 (requiring evidence that reliance would be reasonable); *In re Indep. Serv. Orgs. Antitrust Litig.*, 85 F. Supp. 2d 1130, 1158 (D. Kan. 2000) (same).

The record evidence shows that JEDEC did not rely on any omission by Rambus and that, if it had, such reliance would not have been reasonable.

B. JEDEC And Its Members Were Aware That Rambus Was Seeking Broad Patent Protection For Its Inventions

The record is replete with testimony that JEDEC members, indeed the entire DRAM and computer industries, were well aware that Rambus would be seeking the broadest possible patent protection and that its business model depended upon having broad, enforceable patents so that it would have a sound intellectual property base upon which to seek the payment of royalties. RPF 596-605. The evidence supporting this general proposition is largely uncontroverted, is laid out in detail in Rambus=s Proposed Findings, and will not be repeated here.

C. JEDEC And Its Members Were Aware That Rambus Might Obtain
 Patent Claims Covering Features Being Considered
 For Standardization

The record evidence also compels the conclusion that JEDEC members and committee leaders were aware that Rambus might obtain patent protection for features being considered for incorporation into JEDEC standards. RPF 466-595.

### 1. The May 1992 JEDEC Meeting<sup>32</sup>

For example, in 1992 IBM and Siemens were concerned that the SDRAM design that JEDEC then was working on might be covered by Rambus patent claims. When listing the pros and cons of various alternative designs, one of the cons of the SDRAM design was that the A2-bank@synchronous DRAM Amay fall under Rambus patents.@ These two companies also shared with each other their understanding that Rambus was seeking \$10 million from Samsung due to the similarity of the SDRAM design with Rambus=s RDRAM architecture. In his *Infineon* trial testimony, Infineon=s Willi Meyer confirmed that, in 1992, he thought it was in fact possible that Rambus would obtain patents covering SDRAM. (Meyer, Trial Tr. 4/26/01, 44 (CX 2088)).

<sup>&</sup>lt;sup>32</sup> This section corresponds generally to RPF 466-561.

These concerns led an exchange at the May 1992 JEDEC meeting, instigated by IBM and Siemens, between Mr. Gordon Kelley of IBM and Mr. Crisp. Mr. Kelley asked Mr. Crisp if he cared to comment about whether Rambus had patents covering features of the SDRAM design then being discussed by JEDEC. Mr. Crisp responded by shaking his head, indicating that he did not want to comment. Contrary to Complaint Counsel=s contention that this exchange lulled JEDEC=s members into thinking Rambus did not have any patents that would cover this particular technology, it in fact was an unusual and surprising response, and one that was a **A**red flag@ to the committee.<sup>33</sup> RPF 491-511.

<sup>&</sup>lt;sup>33</sup> There were many other **A**red flags@that singly and collectively put JEDEC and its members on notice that Rambus was seeking the broadest possible patent protection for its inventions and that the patents it was seeking might cover many of the features then being considered by JEDEC for inclusion in a DRAM standard. *See, e.g.*, RPF 466

Complaint Counsel contend, the JEDEC members in attendance at this meeting had understood Mr. Crisp=s silence to be an indication that Rambus did not have any patent claims that might cover the SDRAM standard, then there would have been no reason to discuss the WIPO application or Mr. Sussman=s views on the likely validity of the claims in that application.

Further evidence that the JEDEC members in attendance at the May 1992 meeting were not Alulled@by Mr. Crisp declining to comment can be found, for example, in documents written just after the meeting in which the authors express a continuing concern about the scope of Rambus=s patent claims. RPF 522-528.<sup>34</sup>

 JEDEC Member Awareness Of Rambus=s Potential Patent Claims Continued Past May 1992, With JEDEC Members Continuing To Believe That Broad Claims Would Not Be

<sup>&</sup>lt;sup>34</sup> Although discussed earlier in this brief, it is worth reemphasizing that if the JEDEC members and leadership in attendance at the May 1992 meeting had thought Rambus was obliged to disclose its patent applications if they **A**read on@ or **A**related to@ the SDRAM standard then under discussion, they would not have accepted Mr. Crisp¬s position that he would not comment. Rather, they would have insisted on a response and one would expect that the various recollections of that meeting, the notes taken at the meeting, the trip reports written after the meeting and the minutes of the meeting itself would have made some reference to Rambus¬s failure to comply with what Complaint Counsel contend were the **A**commonly known@JEDEC disclosure rules. Instead, there is no mention of any such disclosure obligation or of Rambus¬s **A**violation@ of the rules. Rather, the documents uniformly reflect that Mr. Crisp¬s silence reinforced a pre-existing concern that Rambus might obtain patent claims that would cover SDRAM, tempered by guarded optimism that prior art might invalidate or substantially narrow any patents Rambus obtained.

Allowed Or, If They Were, That They Would Be Invalid Based On Prior Art<sup>35</sup>

After May 1992, Rambus informed JEDEC as a group, as well as numerous individual JEDEC members, about its potential intellectual property claims, and concerns about the broad scope of Rambus=s potential claims were raised again and again by JEDEC members. In a recurring pattern, however, the concerns were repeatedly dismissed on the grounds that such broad claims would not be valid in light of the prior art.

For example, Rambus=s disclosure of its first issued patent to JEDEC prompted a further discussion of Rambus=s PCT application at a JEDEC meeting in September 1993. Mr. Willi Meyer of Siemens testified that the PCT application was characterized at that meeting as **A**a collection of prior art.@ (A few months later, Mr. Meyer said, **A**All computers will (have to be) built like this some day, but hopefully

<sup>&</sup>lt;sup>35</sup> This section corresponds generally to RPF 523-59.

(which consisted entirely of JEDEC member companies and consisted largely of JEDEC representatives from those companies) that its work might infringe Rambus=s intellectual property. In response, some of the SyncLink participants opined that a predecessor of SyncLink known as RamLink would serve to invalidate any of Rambus=s patent claims that were broad enough to cover SyncLink. RPF 536, 540-42.

At the September 1995 JEDEC meeting, Rambus responded to the question that had been posed at the prior meeting in a written statement that was appended to the minutes of the meeting. First, Rambus hastened to make clear that, to the extent that SyncLink was relying on invalidating Rambus=s patents using the RamLink prior art, it would not succeed because Rambus=s work predated RamLink. In the statement, Rambus elected not to make **A**a specific comment on our intellectual property position relative to the SyncLink proposal.@ Rambus stressed, however, that Rambus=s **A**presence or silence@ at JEDEC meetings does not **A**make any statement regarding potential infringement of Rambus intellectual property.@ Rambus=s statement was interpreted as a warning that there should be concern about Rambus=s intellectual property. In this time frame, Rambus also directly informed a number of JEDEC members that it expected to obtain broad claims that could cover SyncLink as well as SDRAM. RPF 543-48.

Concerns over the scope of Rambus=s intellectual property prompted investigations of Rambus=s patents in the mid-1990s by a number of companies including Mitsubishi and Micron. Mitsubishi believed that it had found prior art from Cray Corporation while Micron noted the RamLink prior art. David Gustavson, the Secretary of the SyncLink Consortium testified that he reviewed Rambus=s European patent applications in that time period and came to the conclusion that they had broad scope, but would not be allowed due to their breadth. RPF 555-59, 562-95..

In a presentation to Samsung in 1994, Dr. Betty Prince summed up the prevailing view as follows: **A**Many of the large systems houses believe that Rambus patents are challengeable by previous internal work and/or patents. The early concern about the impact of the Rambus patents on the major systems houses seems to have diminished considerably.@ (RX 2153 at 10); *see also* RPF 774-75.

 The Concern Of JEDEC Members Regarding The Scope Of Rambus=s Patent Claims Continued Even After Rambus Left JEDEC<sup>36</sup>

In June 1996, Rambus confirmed its withdrawal from JEDEC and warned JEDEC that, in addition to its issued patents, Rambus had **A**applied for a number of additional patents in order to protect Rambus technology.@ RPF 560.

Even after Rambus=s withdrawal, JEDEC members continued to be concerned about and to investigate Rambus=s intellectual property. The extent of

<sup>&</sup>lt;sup>36</sup> This section corresponds generally to RPF 562-95.

Micron=

including the =327 patent, to DRAM engineers and JEDEC representatives from various

ordinary skill in the art reviewing the 898 application would regard as essential. Manual of Patent Examining Procedure 2163(I)(B).

After the PCT application was published, Rambus disclosed its key inventions in numerous other public documents, including marketing brochures and papers about the first RDRAM. RPF 638-54.

In September 1993, Rambus=s first United States Patent was issued. The 703 patent, like the PCT application, claims priority to the filing date of the 898 application and its specification is identical in all material respects to that of the 898 application, including a clear description of the four features at issue. Moreover, although under no legal obligation to do so, Rambus listed in the 703 patent the nine other divisional applications of the 898 application that were then pending, clearly disclosing to the world that Rambus was actively pursuing a number of the inventions in the 898 application. RPF 714-19.

### V. JEDEC CHOSE THE FOUR FEATURES IN QUESTION BECAUSE THEY WERE THE ABEST@FEATURES AND BECAUSE THERE WERE NO ACCEPTABLE ALTERNATIVES<sup>38</sup>

Given the evidence that JEDEC members were concerned that Rambus might obtain patents that would cover many of the features JEDEC was incorporating into SDRAM and DDR, it is fair to ask why they sought to include these features, particularly

<sup>&</sup>lt;sup>38</sup> This section corresponds generally to RPF 720-1258.

in light of the alternatives that Complaint Counsel contend were readily available. Complaint Counsel contend it is because, in violation of JEDEC=s rules, Rambus did not disclose additional information about its pending patent applications or its intentions to Rambus=s technologies over all others, even after Rambus obtained issued patents covering the technologies and demanded royalties for their use. The evidence also shows that Rambus=s technologies were superior to any noninfringing alternatives rejected these alternatives. For SDRAM, JEDEC selected two of the four Rambus technologies at issue: programmable CAS latency and programmable burst length. In the process of developing the SDRAM standard, JEDEC considered and rejected many of the alternatives that Complaint Counsel now assert JEDEC could have adopted in place of the Rambus technologies. RPF 746-58 With regard to this selection process, Gordon Kelley, the chair of 42.3, testified that JEDEC considered the available technologies and selected what was considered to be the best. RPF 727 ; (Kelley, Tr. 2707-09).

Similarly, when developing the DDRc -0.0008 Tw 0 4h2 0 Tof the

The JEDEC Future DRAM Task Group began work on the DDR2 in

DDR2, but those proposals were apparently rejected; the Task Group elected to adopt the

on

DDR2 retain programmable CAS latency, even though he was Anot currently locked in.@ RPF 749-51. A54 2949 JEDECD -0.2 Tf9Tw (-) Tj 4.32 0 TD 0 Tc (51.) Tj 16.2 0 -j 445549burst length of 8 in addition to 4. At that same meeting, AMD also proposed the addition of a burst length of 8. According to Intel, adding a burst length of 8 would result in a **A**[p]otential improvement of 4-10% on high-bandwidth applications.<sup>@</sup> The vote to ballot this proposal was unanimous. RPF 754-58.

Despite all of this effort, JEDEC adopted each of the four Rambus technologies in the DDR2 standard.

This evidence supports two important inferences. First, JEDEC was not bound to use the Rambus technologies in DDR2 by its choice to use them in DDR. While Complaint Counsel elicited some testimony that DDR2 incorporated the technologies because of technological constraints, the evidence undermines this notion. It makes no sense, if there were such a technological restraint, that JEDEC would spend so much time examining alternatives. Moreover, the absence of any technical constraint is illustrated by the fact that JEDEC at first selected an alternative to Rambus=s programmable burst length technology, but in September 2001 elected to adopt Rambus=s technology.

Second, given that JEDEC could have adopted alternatives in DDR2, this evidence shows that additional information about Rambus=s patent interests would not have caused JEDEC to adopt alternative technologies. In other words, the additional disclosures that Complaint Counsel contend should have been made would not have upset JEDEC=s revealed preference for the four Rambus technologies. JEDEC has demonstrated in the real world that additional knowledge of Rambus=s patent interests does not lead it to stop using Rambus=s technologies.

While this evidence alone supports the conclusion that JEDEC would have adopted Rambus=s technologies in the but-for world, it is fair to ask why JEDEC rejected the alternatives in the face of Rambus=s issued patents. The evidence supports two inferences. First, as discussed above, JEDEC members were convinced that Rambus=s patents would be invalidated by prior art. *See*, e.g., RPF 764-83. With regard to DDR2, the evidence shows that these beliefs specifically motivated JEDEC. Mark Kellogg of IBM testified, for example, that after he examined Rambus=s patents in 2001, he believed that there was prior art to Rambus=s patents and he conveyed his opinion to other DRAM manufacturers. According to Mr. Kellogg, the DRAM manufacturers **A**were considering the fact that some of the Rambus patents might be overturned@ when making decisions about whether to try to design around Rambus=s technologies is that they were superior to the alternatives. In fact, the evidence shows this to be the case.

B. Complaint Counsel Have Not Met Their Burden To Prove There Existed Were Acceptable, Noninfringing Alternatives To Rambus=s Technologies

Complaint Counsel=s case turns critically on the existence of acceptable, noninfringing alternatives that JEDEC could have and would have adopted in the but-for world. If there were no such alternatives, any market power Rambus may have was created not by Rambus=s alleged wrongful conduct but by the superiority of the technologies covered by its patents. *See, e.g.,* 2 H. HOVENKAMP, ET. AL., IP AND ANTITRUST, ' 35.5, at 35-43 (2003) (**A**if the patent is one that actually confers an economic monopoly because of the absence of feasible noninfringing alternatives, it is the patent itself **B** not the patentee=s failure to disclose it to the standard-setting organization **B** that restricts competition in the market@).

This means that, in order for Complaint Counsel to show that Rambus=s alleged conduct had any market impact, Complaint Counsel must prove that there was an available and acceptable noninfringing alternative for *both* of the necessary SDRAM technologies and for *all four* of the necessary DDR SDRAM technologies. Simply asserting that an alternative was available, acceptable, and noninfringing is not enough. AMere speculation or conclusory assertions will not suffice@, rather, there must be Aconcrete factual findings@sufficient to support an inference an acceptable alternative was in fact available. *Grain Processing Corp. v. American Maize-Products Co.*, 185 F.3d 1341, 1353 (Fed. Cir. 1999). To meet their burden, Complaint Counsel had to prove that there were acceptable, noninfringing alternatives that were **A**equal or superior@to Rambus=s technologies.

At trial, both Complaint Counsel and Rambus presented evidence concerning a number of supposed alternatives for each of Rambus=s technologies. This evidence is summarized in Rambus=s Proposed Findings at Section IX.B, RPF 785-1146. While the evidence is intricate in its detail, it can be summarized thus: Each of Complaint Counsel=s proposed alternatives suffers from one or more of the following defects: it is too costly; it lacks the necessary performance; or it is covered by patents of Rambus or others. In short, Complaint Counsel failed to meet their burden to show that there were available and acceptable noninfringing alternatives to Rambus=s technologies.

<u>First</u>, Complaint Counsel failed to prove that their proposed alternatives were noninfringing. To be acceptable, an alternative must be **A**noninfringing,@*i.e.*, it would have to avoid both Rambus=s patents and other companies=patents. Complaint Counsel=s economic expert admitted as much. RPF 1123. *See, e.g.*, Complaint Counsel=s Memorandum in Support of Motion to Dismiss the Complaint, *In the Matter of VISX*, *Inc.*, Dkt. No. 9286 (**A**Complaint Counsel *VISX* Br.@), pp. 6-7 (requesting dismissal of complaint seeking to enjoin enforcement of patent allegedly procured by fraud because Respondent received new patent **A**that will give [Respondent] monopoly power in the technology market and market power in the apparatus market to the same extent as the old one@).

Complaint Counsel did not make any effort to bear this burden. For not one of their proposed alternatives did Complaint Counsel produce a shred of evidence that it was noninfringing. Even when Rambus produced evidence that other patents affected various of the supposed alternatives, Complaint Counsel made no effort to controvert this evidence. RFP 1123-24. At the outset, then, Complaint Counsel failed to meet their burden.

Second, Complaint Counsel failed to prove that their proposed alternatives

Rational JEDEC members thus would have selected the Rambus technologies even with full knowledge that they would have to pay royalties to Rambus.

In sum, Complaint Counsel failed to show that there were acceptable, noninfringing alternatives to Rambus=s technologies.

C. Complaint Counsel Failed To Prove That JEDEC Would Have Adopted Alternative Technologies Even If Rambus Had Made The Disclosures Complaint Counsel Envision<sup>40</sup>

Even if there were acceptable, noninfringing alternatives, Complaint

Counsel must still prove that JEDEC would have adopted the alternatives in the but-for world. As discussed above, the fact that JEDEC chose to incorporate Rambus=s inventions, even after Rambus began to assert its issued patents, shows that JEDEC=s revealed preference for Rambus=s technologies would not change in the but-for world. An entirely separate body of evidence also confirms this to be the case.

Professor Teece=s decision tree analysis demonstrated that, had Rambus made the additional disclosures Complaint Counsel assert should have been made, the same outcome as occurred in the real world would have occurred in the but-for world **B** JEDEC would have incorporated the Rambus technologies into its standards.

<sup>40</sup> This section corre

1. Had Rambus Disclosed, JEDEC Might Have Proceeded Without Seeking A RAND Assurance From Rambus

The analysis begins with the question, what would JEDEC have done had Rambus made these additional disclosures? JEDEC first would have had to decide whether to request a RAND letter. RPF 1158. If JEDEC had not asked Rambus for a RAND letter, both Rambus=s and Complaint Counsel=s economic experts testified that JEDEC would have adopted Rambus=s technologies despite the additional disclosures. Third, JEDEC might not have asked for a RAND letter from Rambus because, in the real world, JEDEC did not seek a RAND assurance from Rambus regarding SDRAM or DDR, despite JEDEC=s knowledge of Rambus=s patents. RPF 1161.

The possibility that JEDEC would not seek a RAND letter based on these factors is not mere speculation. There was, in fact, a real-world example in the 1995-1996 time frame where an EIA standards body did not request a RAND letter despite an assertion by a member that it possessed a patent relating to the standard. The EIA committee did not seek a RAND assurance because it believed the member was gaming the system. In that case, Echelon gave notice to the Consumer Electronics Association (ACEA@) that it had an issued patent that might cover a technology included in a CEA standards proposal. At the time, Echelon was promoting its own technology in competition with technology included in the standard. EIA General Counsel John Kelly was personally involved in the Echelon situation, and he testified that RAND assurances were not sought from Echelon because Ait appeared to us at the time . . . that Echelon was deliberately trying to impede the process, to stall it out for its own purposes ....@ In other words, Mr. Kelly believed that if a request for RAND assurances was made to Echelon, Echelon would refuse to give those assurances, and the standardization process would necessarily come to a stop.

The economic evidence shows that had Rambus made the additional disclosures Complaint Counsel contend should have been made, it would have been in Rambus-s economic interests to give a RAND letter. RPF 1184-1203. Simply put, as Professor Teece pointed out, in the but-for world Rambus would have a lot to gain and little to lose by giving a RAND letter. Once it had made the additional disclosures, it gave up any benefit from keeping information about its pending or future patents applications confidential. As a pure-play technology company dependent on licensing for its revenues, it would have strong economic incentives to give the RAND letter because doing so would increase the likelihood that it would earn licensing revenues. This incentive would be even stronger if there were good alternatives to Rambus=s technologies. (Teece, Tr. 10340-47).

## b. There Would Not Have Been Any *Ex Ante* Negotiations

Complaint Counsel=s economic expert testified that once Rambus issued a RAND letter, JEDEC members would have an Aincentive@to engage in *ex ante* negotiations, *i.e.*, to negotiate with Rambus prior to the adoption of Rambus=s technologies into the SDRAM and DDR standards. These negotiations necessarily would have occurred before Rambus=s patents issued. Complaint Counsel, however, have produced no evidence that similar negotiations **B** *i.e.*, negotiations for a naked license to a patent application **B** have ever occurred. To the contrary, as the uncontested evidence

shows, such negotiations would be difficult and costly, and therefore unlikely. Complaint Counsel=s expert effectively conceded as much. RPF 1204-18

## c. JEDEC Would Have Adopted Rambus=s Inventions With Rambus=s RAND Assurance

With a RAND letter from Rambus in hand, JEDEC would have been faced with the decision of incorporating Rambus=s technologies or seeking alternatives. The evidence shows that JEDEC would have adopted Rambus=s technologies. First, the alternatives were inferior, even when taking into account Rambus=s royalties. Second, with a RAND letter, there is little to upset JEDEC=s revealed preference for Rambus=s technologies. Third, the evidence shows that JEDEC has been willing to adopt patented technologies, and it would likely do the same thing with Rambus=s technologies. RPF 1219-20.

In fact, the record is replete with examples of JEDEC incorporating technologies into its standards despite patent issues. JEDEC adopted the on-chip PLL/DLL technology for DDR knowing that Mosaid had a patent on the technology. The JC 42.3 mee034 r Tc nutntos tht Mosa4a The evidence shows that, had Rambus provided a RAND assurance, JEDEC surely would have adopted its technologies. Consistent with JEDEC=s actual conduct, several JEDEC members testified that JEDEC, upon receipt of a RAND letter from Rambus, would not have pursued alternatives. *E.g.*, RPF 1239-41.

\* \* \* \* \*

In sum, the most likely scenario is the one in which JEDEC asks for and receives a RAND assurance from Rambus, no *ex ante* negotiations take place, and JEDEC incorporates Rambus=s technologies in both SDRAM and DDR. Accounting for that scenario and the possibility that JEDEC might proceed without asking for a RAND letter, it is a virtual certainty, had Rambus made the additional disclosures that Complaint Counsel allege should have been made, that JEDEC would have adopted the same standards in the but-for world that it adopted in the actual world. RPF 1245.

## VI. JEDEC IS NOT ALOCKED IN@ TO THE FOUR FEATURES AND, IF THERE WERE VIABLE ALTERNATIVES, JEDEC COULD SWITCH TO THEM EVEN NOW<sup>42</sup>

Complaint Counsel try to explain the failure of JEDEC and its members to adopt any of the supposed alternatives that Complaint Counsel proffer by contending that the DRAM industry is Alocked-in@to using the four Rambus technologies. That is, Complaint Counsel cry it=s too late; now that the DRAM industry is using the Rambus

<sup>&</sup>lt;sup>42</sup> This section corresponds generally to RPF 1259-1360.

technologies, switching to Complaint Counsel=s alternatives would be too costly, too difficult, and too disruptive. If this were the case, however, we would not expect JEDEC and its members to waste time proposing and considering these very alternatives. Yet, that is precisely what they did; JEDEC members proposed, evaluated and considered alternatives to Rambus=s technologies in SDRAM and DDR throughout the pertinent time period. Second, DRAM manufacturers are constantly redesigning DRAM products and changing their manufacturing lines to incorporate new designs and manufacturing techniques. For instance, Micron **A**taped out@numerous new DRAM designs each year. In fact, Micron taped out new designs for SDRAM and/or DDR each year from 1995 to 2002. Infineon=s Richmond plant, which started production in 1998, has produced eight different types of SDRAM and two different types of DDR. In 2002 Infineon produced or planned to produce 34 different types of DDR, 27 different types of SDRAM, 7 different types of Graphics RAM, 20 different types of Mobile-RAM, and 6 different types of RLDRAM. RPF 1278 -1307. Plainly, economic forces **B** such as economies of scale and network effects **B** do not lock-in DRAM manufacturers.

Third, the DRAM industry routinely coordinates transitions to new DRAM standards. AMD, starting from scratch in June 1997, so quickly coordinated the design and production of every complementary product **B** motherboards, chip sets, BIOS, etc. **B** for its newly designed microprocessors, that complete computer systems were shipping in 1999. Since then, the industry has coordinated transitions for the AMD microprocessor from PC100 to PC133 to DDR200 and 266 to DDR 333 to DDR400 in the period from June 1999 to May 2003. Similarly, from 1995 to 2002, Compaq coordinated transitions for its computers from EDO to PC66 to PC100 to PC133 to DDR266 to DDR333. These transitions required the design, manufacture and coordination of complementary

components **B** new chipsets, new motherboards, etc. RPF 1308-

JEDEC, in violation of JEDEC=s rules, information about its pending or future patent applications. Even if this factual allegation were proven by clear and convincing evidence, Complaint Counsel still would need to prove that such conduct is exclusionary. They have not done so and cannot do so.

<u>First</u>, exclusionary conduct is defined in both antitrust law and economics as conduct that does not make business sense except for its impact on competition. In other words, by definition, exclusionary conduct lacks any legitimate business justification. However, the record evidence proves that there are several legitimate business reasons for not disclosing information regarding pending or future patent applications, even if JEDEC=s rules required disclosure. The evidence also shows that these legitimate reasons motivated Rambus=s conduct. Consequently, Complaint Counsel have failed to meet their burden of proving that Rambus=s alleged conduct was exclusionary.<sup>43</sup>

<sup>&</sup>lt;sup>43</sup> This is not to say, however, that a failure to comply with rules may not give rise to a claim for breach of contract or some other claim. Rather, this is to say that engaging in conduct that also is consistent with legitimate business justifications is, by definition, not exclusionary.

Second, Complaint Counsel=s own economic expert testified that a necessary condition for conduct to be deemed exclusionary is that equal or superior alternatives were excluded. Complaint Counsel have failed to satisfy this condition. The unrebutted economic evidence shows that Rambus=s technologies were superior to Complaint Counsel=s proposed alternatives.

Because Complaint Counsel have failed to show that Rambus=s alleged conduct is exclusionary under either the generally accepted definition or the definition proffered by their own expert, Complaint Counsel=s claims fail.

## A. Exclusionary Conduct Means Conduct That Has No Legitimate Business Justification

Antitrust law and economic theory are of one accord on the definition of exclusionary conduct. According to the courts, to be exclusionary conduct must have A>no rational business purpose other than its adverse effects on competitors.=@ *Concord Boat Corp.*, 207 F.3d at 1062 (quoting *Stearns Airport Equip. Co. v. FMC Corp.*, 170 F.3d 518, 522 (5th Cir. 1999));<sup>44</sup> see also Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 608, 610-11 (1985) (holding that conduct was exclusionary where the

<sup>&</sup>lt;sup>44</sup> Some courts refer to exclusionary conduct as predation. *See, e.g., Neumann v. Reinforced Earth Co.*, 786 F.2d 424, 427 (D.C. Cir. 1986) (Apredation involves aggression against . . . rivals through the use of business practices that would not be considered profit maximizing except for the expectation that (1) actual rivals will be driven from the market, or the entry of potential rivals blocked or delayed, so that the predator will gain or retain a market share sufficient to command monopoly profits, or (2) rivals will be chastened sufficiently to abandon competitive behavior the predator finds threatening to its realization of monopoly profits@).

defendant failed to offer **A**any efficiency justification whatever@for its pattern of conduct, and where it was instead **A**willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rival@). Indeed, the Federal Trade Commission and the Department of Justice recently represented to the Supreme Court that conduct is exclusionary only when it **A**would not make economic sense unless it tended to reduce or eliminate competition.@ Brief for the United States and the Federal Trade Commission as Amicus Curiae on Petition for a Writ of Certiorari, *Verizon Communications, Inc. v. Trinko*, No. 02-682, at 13 (December 2002) (**A**FTC *Trinko* Br.@) <u>http://www.usdoj.gov/osg/briefs/2002/2pet/5ami/2002-</u> 0682.pet.ami.pdf.<sup>45</sup> Similarly, as the uncontradicted evidence at trial has shown, the

<sup>&</sup>lt;sup>45</sup> See also FTC Trinko Br. at 9 (criticizing a theory of antitrust liability Auncabined by any requirement that the challenged conduct be exclusionary or predatory **B** B[nduct b]ot make economic sense u

economic definition of exclusionary requires that the conduct consist of short-run actions that do not make sense except in terms of their adverse impact on competition. (Rapp, Tr. 9911).

Conduct cannot be exclusionary if there is a legitimate business justification for such conduct because, in that case, the conduct *does* have a rational business purpose apart from its adverse effects on competitors. (See Rapp, Tr. 9911 (exclusionary conduct is Ashort-run actions without an independent business justification<sup>®</sup>). A legitimate business justification therefore defeats a claim of monopolization. As the Ninth Circuit bluntly put it, AIf there is a valid business justification for [defendants=] conduct, there is no antitrust liability.@ High Technology Careers v. San Jose Mercury News, 996 F.2d 987, 990 (9th Cir. 1993); see also Stearns Airport Equip. Co. v. FMC Corp., 170 F.3d 518, 522 (5th Cir. 1999) (AThe key factor courts have analyzed in order to determine whether challenged conduct is [exclusionary] is the proffered business justification for the act. If the conduct has no rational business purpose other than its adverse effects on competitors, an inference that it is exclusionary is supported.<sup>(a)</sup>. Or as the Eighth Circuit explained, AActs which are ordinary business practices typical of those used in a competitive market do not constitute anti-competitive conduct violative of Section 2.@ Trace X Chemical, Inc. v. Canadian Industries, Ltd., 738 F.2d 261, 266 (8th Cir. 1984).

Valid business justifications **B** or, in the Supreme Court=s words, Anormal

exclusionary because firms legitimately cut prices to increase market share). In other words, where there is business justification, the challenged conduct is not exclusionary even if **A** 

1. There Are Legitimate Business Reasons To Keep Information About Pending Applications Confidential, As Rambus Was Advised By Its Attorneys<sup>51</sup>

<sup>&</sup>lt;sup>51</sup> This section corresponds generally to RPF 1427-47.

United States patent law Aembodies a carefully crafted bargain®. The patentee discloses his invention, thereby giving up trade secret protection; in return the patentee obtains the right to exclude others from making or using his invention for a limited period of time. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150 (1989). Before that bargain is consummated by the issuance of a patent, patent applications are maintained in strictest confidence by the Patent Office.<sup>52</sup> (Fliesler, Tr. 8830). The courts have recognized the important values served by this policy. *See, e.g., Iron & Sears v. Dann*, 606 F.2d 1215, 1220-21 (D.C. Cir. 1979) (denying access through the Freedom of Information Act to patent applications to prevent competitive harm); *Lee Pharmaceuticals v. Kreps*, 577 F.2d 610, 616 (9th Cir. 1978) (same).

It also is critical for applicants to keep their patent applications confidential. (Fliesler, Tr. 8829-30). Prior to the issuance of a patent, patent applicants have no ability to protect their inventions from use by competitors other than by keeping the inventions confidential. (Fliesler, Tr. 8829-30). Also, if the Patent Office does not grant the patent, the applicant can retain trade secret protection over the inventions described in the application so long as it has maintained the application in confidence. (Fliesler,

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Tr. 8836-37). Moreover, patent applications may disclose an applicant=s competitive strategies; applications may show the areas of technology that the applicant is developing and disclose the areas of technology for which the applicant is seeking patent protection. (Fliesler, Tr. 8840).

Confidentiality remains important even after the written description and drawings of a patent application become public (for instance, through the publication of a related PCT application or the issuance of a patent for which the pending patent is a continuation or divisional). Pending patent applications still contain valuable information. (Fliesler, Tr. 8837-38, 8840-41). Specifically, the *ent is a 1 TD /F8 12.6i Tw (cnt is a )10* 

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Disclosure of information regarding pending U.S. patent claims thus may allow a competitor to win the Arace@to these foreign patent offices.

These concerns are not merely theoretical; they have real world impact. Competent patent attorneys routinely advise their clients to strictly maintain the confidentiality of pending patent applications. For example, Martin Fliesler, a patent attorney with over 30 years of experience prosecuting patent applications, testified at trial that he advises his clients not to disclose patent applications but to keep them confidential. (Fliesler, Tr. 8765-72, 8842-43). Should disclosure be necessary as part of against us in terms of our competitive position in the marketplace.

(Crisp, Tr. 3496). In his letters transmitting copies of Rambus=s patent applications, Mr. Vincent repeatedly reminded Mr. Crisp to Akeep in mind that this information is confidential.@ (CX 1951 at 2; CX 1945 at 2). Naturally, Mr. Crisp followed this legal advice, including while he was at JEDEC. (Crisp, Tr. 3496-97).

These Legitimate Business Reasons Mean That Rambus=s
 Alleged Conduct Was Not Exclusionary<sup>53</sup>

The uncontradicted testimony at trial shows that these reasons for not disclosing information about pending patent applications or intentions to file or amend future applications are Alegitimate business justifications@that preclude Rambus=s alleged conduct from being exclusionary. The evidence shows not only that not disclosing such information is an Aordinary business practice[] typical of those used in a competitive market,@*Trace X Chemical*, 738 F.2d at 266, and that there are Arational business purpose[s]@for doing so apart from any adverse effects on competitors, *Stearns Airport Equip.*, 170 F.3d at 522, but also that not disclosing this information relates Ato the enhancement of consumer welfare,@*Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1183 (1st Cir. 1994).

<sup>&</sup>lt;sup>53</sup> This section corresponds generally to RPF 1427-58.

Not disclosing information about pending patent applications or intentions regarding future applications was not unique to Rambus; it is an ordinary business practice in the DRAM industry. For instance, Robert Goodman, the CEO of Kentron, testified that Kentron=s policy is to treat patent applications as trade secrets and to preserve their confidence. (Goodman, Tr. 6072). When Kentron was asked by members of a JEDEC committee to disclose the claims of a pending patent application, Kentron refused and never disclosed its actual pending claims, instead disclosing only a generalized description of its application. (Goodman, Tr. 6059-60, 6067-70).

Similarly, in October 1992 JC 42 chairman Jim Townsend circulated to members of the committee an article entitled ADon=t Lose Your Patent Rights.@ (CX 342 at 8). In the article, inventors are admonished to AKeep It Under Your Hat,@*i.e.*, not disclose their inventions prematurely because disclosure may waive any rights to obtain a patent. *Id.* According to the article, in the United States if an inventor does not file an application within one year of a disclosure, the inventor is barred from obtaining a patent. *Id.* The article warns that in some foreign jurisdictions, however, AAny disclosure before filing of an application will bar rights to a patent.<sup>@54</sup></sup> *Id.* (emphasis added).

<sup>&</sup>lt;sup>54</sup> Notably, this article was sent to many of the witnesses Complaint Counsel called at trial to testify regarding JEDEC=s patent policy, including John Kelly, Brett Williams, Howard Sussman, Willi Meyer, Desi Rhoden, Gordon Kelley, and Mark Kellogg. (CX 342 at 1).

The economic testimony at trial thus demonstrated that the reasons Rambus had for not disclosing information about its pending or future patent applications were rational business purposes unrelated to any adverse effect on competitors. (Rapp, Tr. 9915-18; 9926).

The evidence also showed that *not* disclosing information about pending or future patent applications may enhance consumer welfare. Non-disclosure of patent applications is *pro-competitive* for the same reason that preserving trade secrets is procompetitive; it preserves incentives to innovate, which depend on the ability to control intellectual property. (Rapp, Tr. 9918-19). Thus, not disclosing information about pending or future patent applications increases competition and thereby enhances consumer welfare.

These conclusions apply in the standard-setting context as in any other. A member of a standard-setting body obtains the benefits from not disclosing information regarding its pending or future patent applications *regardless* of what standards are developed. (Rapp, Tr. 9919-20). In other words, the benefi20c 08 12.96 1.1onces

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nondisclosure. (Rapp, Tr. 9921). Keeping that information confidential did not impose on Rambus costs or risks that were compensable only by excluding rivals and thereby gaining market power. (Rapp, Tr. 9924). In other words, Rambus=s alleged nondisclosure is not exclusionary conduct.

This economic evidence stands uncontradicted. Complaint Counsel=s economic expert conceded that concealing information, even if it discourages competitors from entering a market, is not exclusionary. (McAfee, Tr. 7525-27). He also conceded that it is not exclusionary to conceal an invention from competitors in order to take advantage of the invention while others cannot. (McAfee, Tr. 7527-28). Yet he admitted that the only **A**candidate purpose@he considered for Rambus=s withholding information about its patent applications was monopolization. (McAfee, Tr. 7539). In other words, Complaint Counsel= that there can be no Section 2 liability **A**if the defendant-s actions can be explained by legitimate business justifications@).

C. That Rambus=s Conduct Might Have Violated Some Common-Law Or Other Non-Antitrust Duty Does Not Make It A Proper Basis For Antitrust Liability

While it is obvious from foregoing, it bears repeating that this conclusion holds even if Complaint Counsel were to prove that Rambus=s conduct violated JEDEC=s rules. In other words, even if JEDEC=s rules *did* require Rambus to disclose information about its pending or future patent applications, Rambus=s failure to do so would not be exclusionary and therefore would not violate the antitrust laws. First, the presence of a JEDEC rule requiring disclosure does not change the definition of exclusionary conduct nor negate Rambus=s legitimate business justifications for not disclosing. Whether conduct is **A**exclusionary@cannot be determined simply by reference to rules, duties or standards extrinsic to the antitrust laws. As Judge Posner put it, exclusionary conduct cannot be determined by liability **A**in tort or contract law, under theories of equitable or promissory estoppel or implied contract . . . or by analogy to the common law tort@rules. *Olympia Equipment Leasing Co. v. Western Union Tel. Co.*, 797 F.2d 370, 376 (7th Cir. 1986).

The courts have repeatedly made clear that a violation of an extrinsic rule, statute, or ethic is not itself exclusionary conduct. As the Fifth Circuit put it, **A**Antitrust law is rife with . . . examples of what competitors find to be disreputable business

practices that do not qualify as predatory behavior.@ *Taylor Publ=g Co.*, 216 F.3d at 476. To prove monopolization, even if JEDEC=s rules were violated, Complaint Counsel must demonstrate that Rambus=s conduct was exclusionary within the meaning of the antitrust laws **B** *i.e.*, that it lacked a legitimate business justification. *See, e.g., Goldwasser v. Ameritech Corp.*, 222 F.3d 390, 399-401 (7th Cir. 2000) (plaintiff must state **A**freestanding antitrust claim@and cannot base its antitrust claim simply on violations of the 1996 Telecommunications Act, even though that Act was intended to promote **A**the development of competitive local markets@; *see also Bucher v. Shumway*, 452 F. Supp. 1288, 1291 (S.D.N.Y. 1978) (no antitrust liability for violation of laws preventing **A**dec

While this is sufficient, there is more. Complaint Counsel also have failed to prove that enforcing JEDEC-s rules would advance the purposes of antitrust law. The refusal of the antitrust laws simply to equate a violation of extrinsic rules with exclusionary conduct applies with special force where the extrinsic rules arise from a private contract or understanding, such as JEDEC=s rules or policies. Private agreements are generally intended to achieve the private goals of the parties and do not necessarily further antitrust goals. Antitrust law, Aframed to preserve normal competitive forces,@ does not Apolice the performance of private contracts.<sup>®</sup> Madison Fund, Inc. v. Charter Co., 406 F. Supp. 749, 751 (S.D.N.Y. 1975). As a result, A claimed breach of contract by unreasonable conduct, standing alone, should not give rise to antitrust liability,@ Vernon v. Southern California Edison Co., 955 F.2d 1361, 1368 (9th Cir. 1992) (emphasis added). Rather, antitrust liability rests on the separate inquiry as to whether a defendant acted Aanticompetitively and without a legitimate business reason.@ Id.; see also Brookside Ambulance Serv., Inc. v. Walker Ambulance Serv., 39 F.3d 1181 (6th Cir. Oct. 26, 1994) (per curiam) (table) (even if it violated existing protocol, defendant ambulance company=s practice of Arun-jumping@was Anot anticompetitive@for antitrust purposes because the practice maximized defendant-s ability to receive calls and promoted efficient use of its ambulance fleet; a firm, Aregardless of its market power,@ may promote efficiency).

Complaint Counsel offered no evidence to support a finding that enforcing a JEDEC disclosure obligation that required the disclosure of pending and future patent knowledge of the representative at the meeting, rather than that of the member company, (McAfee, Tr. 7724); and because in large companies, the representative might not have much knowledge of the company=s patents. (McAfee, Tr. 7724-25). He also admitted that a JEDEC disclosure requirement does not mitigate the risk that the standard might involve technology covered by patents held by nonmembers. (McAfee, Tr. 7725). In short, even according to their own economist, the benefits of Complaint Counsel=s presumed disclosure rule are limited.

Even further, there is economic evidence that weighs against a finding that enforcing JEDEC=s rules would promote economic efficiency. There are economic costs involved with disclosing information about pending and future patent applications, which include the cost to the patent applicant of losing trade secret protection and other benefits of confidentiality. (Teece, Tr. 10453). JEDEC too would bear the costs of trying to evaluate and assess this highly preliminary information. (Teece, Tr. 10453-54). Complaint Counsel did not demonstrate that the benefits of disclosure would outweigh these significant costs. To be sure, if the scope of any required disclosure was narrow, the attendant costs and burdens of disclosure would be reduced. (Teece, Tr. 10454, 10547-58). But a narrower scope of disclosure also reduces the supposed benefits of disclosure even further, and gives little for JEDEC to work with to avoid hold-up. If anything, a limited disclosure, say only an acknowledgment that some aspect of a ballot proposal is covered by a patent application or a general description of the subject matter

inferior products from the market is not exclusionary in an economic sense. (McAfee, Tr. 7536). The economic evidence shows, however, that the cost and performance advantages of the Rambus technologies made them superior to the alternatives. (Rapp, Tr. 9861-62). Complaint Counsel have not refuted this evidence.

Unlike Rambus, Complaint Counsel did not proffer any evidence quantifying the cost differences between the Rambus technologies and the alternatives Complaint Counsel proposed. In fact, Professor McAfee admitted that he did not quantify any cost differences between Rambus=s technologies and the alternative technologies. (McAfee, Tr. 11340).

Nor did Complaint Counsel offer any evidence quantifying the performance or flexibility differences between the four Rambus technologies in question and Complaint Counsel=s proposed alternatives. For instance, although Complaint Counsel=s economic expert admitted that JEDEC members would consider performance differences in deciding whether to pursuefee admitted that/

of price elasticity. In other words, he did not consider the price level required before the alternatives would actually constrain the price. Instead, he simply looked for evidence that an alternative was considered as a possible alternative by members of JEDEC and whether knowledgeable engineers now claimed that the alternative was viable. (McAfee, Tr. 7333-34). Under this analysis, an alternative can therefore be **A**commercially viable<sup>®</sup> without being equal or superior. (Teece, Tr. 10368, 10370-71).

Further magnifying this error, Complaint Counsels economic expert defined commercial viability with respect to the subjective preferences of JEDEC and rather than seeking to determine whether the proposed alternatives were equal or superior in any objective sense (*i.e.*, cost-performance criteria). (McAfee, Tr. 7335). For instance, he judged patented technologies to be **A**hobbling@because the JEDEC rules supposedly put a **A**penalty@on technologies that were covered by intellectual property. (McAfee, Tr. 7337,7582-83). He thus regarded patented technologies, such as Rambuss, as inferior merely because of the presence of intellectual property and without regard to the level of royalties sought for that technology in relation to their performance and other cost benefits.

JEDEC=s alleged preferences are not a proxy for consumer welfare; determining whether an alternative is **A**equal or superior@cannot turn on such subjective judgments. For example, in a competitive market, if the best solution in cost-performance terms is patented and involves the payment of royalties, competition will dictate that the royalties be paid and that the patented solution is adopted. (Rapp, Tr. 9939). While individual executives in an industry may dislike paying royalties, just as they may dislike paying healthcare costs for workers or a competitive wage, they will have no choice because competition will mandate that these costs be incurred. (Rapp, Tr. 9938-39). Consumers benefit by obtaining the best cost-performance alternatives even though the industry executives may have wanted another alternative.

While this is sufficient to undermine the reliability of Complaint Counsel-s economic expert-s opinion, the other factors he considered were even more subjective. For instance, he considered **A**a perception of the magnitude of the problems@associated with a technology as Arelevant to the determination of which technologies should be selected.@ (McAfee, Tr. 7586). In other words, he based his determination of whether a technology was Aequal or superior@on the subjective perceptions of JEDEC members at the time, regardless whether these perceptions were correct. Similarly, he factored in whether some JEDEC members might prefer the technology because they are better equipped to produce it. (McAfee, Tr. 7338-39). Complaint Counsel-s economic expert also relied on his notion of Asatisficing,@to conclude, in effect, that a product that has less performance is nonetheless Aequal@to one with better performance. (McAfee, Tr. 7335-36). In other words, because he believed that JEDEC was Asatisficing,@Complaint Counsel-s economic expert defined Aequal@to include technologies that were *inferior* to Rambus-s technologies. In short, Complaint Counsel-s economic expert let JEDEC-s

subjective preferences dictate his analysis of what technologies were **A**equal or superior<sup>®</sup> to Rambus technologies.

Not only were the factors considered by Complaint Counsels economic expert subjective, his methodology was as well. Rather than examining the actual cost differences between the Rambus technologies and the alternatives, Complaint Counsels economic expert simply opined that he had considered an amalgam of factors and determined that certain alternatives were **A**commercially viable@ based **A**on the information [he] analyzed.@ (See, e.g., McAfee, Tr. 7363). Even his ultimate conclusion was subjective and therefore impervious to testing. While he testified that it was likely that at least one of the technologies he deemed commercially viable alternatives to Rambus=s technology was equally efficient or superior to Rambus=s technology, he admitted that *he could not identify any particular technology as equal or superior to Rambus=s technologies*. (McAfee, Tr. 7578-79). This methodology leaves the conclusions with little foundation. *Cf. O=Conner v. Commonwealth Edison Co.*, 13 F.3d 1090, 1106-07 (7th Cir. 1994) (excluding expert testimony because of its subjective nature).

And it means that even under the definition of exclusionary offered by their own economist, Complaint Counsel has not proven that Rambus=s alleged conduct was exclusionary.

E. Rambus-s Amending Its Patent Applications Was Not Exclusionary;

Complaint Counsel cannot circumvent the law, principles of economics and the testimony of their own economics expert by now arguing that Rambus took ideas for some of its patents from discussions at JC-42.3 and that such conduct is anticompetitive. Indeed, such an argument would run afoul as well of concessions made by Complaint Counsel=s patent law expert, Mr. Nusbaum.

The patent laws dictate that Rambus=s patents could be based only on the Aideas@described in the original Farmwald-Horowitz patent application (the =898 application). Rambus could not have Ataken@ideas from JEDEC to be incorporated into its patent applications.<sup>57</sup> The patent laws also make it clear that Rambus was well within its rights to seek claims for the inventions disclosed in the =898 application that it saw being considered for use by JEDEC members. The courts have repeatedly held that there is nothing improper with such Astandard practice.@

<sup>&</sup>lt;sup>57</sup> Moreover, as Complaint Counsel have acknowledged, they do not and cannot secondguess the PTO-s determination that Rambus-s patents properly claim priority to the original 898 application.

As background, it is important to understand the interaction between the

two parts of a patent:

The patent document which grants the patentee a right to exclude others and hence bestows on the owner the power to license, consists of two primary parts: (1) a written description of the invention, which may and here does include drawings, called the Aspecification,@enabling those skilled in the art to practice the invention, and (2) claims which define or delimit the scope of the legal protection which the government grant gives the patent owner, the patent Amonopoly.@

General Foods Corp. v. Studiengesellschaft Kohle mbH, 972 F.2d 1272, 1274 (Fed. Cir.

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further innovation based on the disclosed inventions. Requiring inventors to claim everything possible in an original application upon pain of losing rights to an invention would go against this policy; inventors would delay filing an application until sure that each possible claim has been meticulously drafted. Second, it is well recognized that reducing an invention to particular claims is a difficult task and that oftentimes the commercial value of a particular potential claim is not apparent at first. The patent laws therefore allow the inventor sufficient flexibility to claim the full scope of the disclosed inventions as the importance of particular aspects of an invention become apparent.

> 1. Patent Applicants May Continue To Claim Inventions Described In An Original Application Through Amendments, Continuations, and Divisionals

To allow the inventor to claim the full scope of the inventions disclosed in the application, patent law allows the inventor to amend its claims, to file continuation applications,<sup>58</sup> or to file divisional applications.<sup>59</sup> Critically, to maintain the same priority date as the original application, any amendment, continuation application, or divisional application must be supported by the disclosure in the original application. 35 U.S.C. " 112, 120, 121, 132. This means that the first requirement of patentability, that the inventor adequately describe the invention (known as the Awritten description@ requirement), is crucial. To be adequate, a written description must Aconvey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of the invention.@Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). The written description requirement, therefore, limits the inventor to those inventions disclosed in the original application: A The purpose of the written description requirement is to prevent an applicant from later asserting that he invented that which he did not; the applicant for a patent is therefore required to recount his

<sup>&</sup>lt;sup>58</sup> A continuation application is a second application containing the same disclosure as the original application. *See* 4-12 CHISUM ON PATENTS '13.03[2] (2003).

<sup>&</sup>lt;sup>59</sup> Divisional applications effectively divide the original application into several applications. Where a patent application contains Aindependent@and Adistinct@inventions, i.e., Ainventions that do not form a single inventive concept,@37 C.F.R. ' 1.141(a), the patent examiner Amay require the application to be restricted to one of the inventions.@ 35 U.S.C. ' 121. In response, the applicant may elect to pursue one of these inventions in the original application and file Adivisional@applications to obtain claims covering the other inventions, and the divisional application retains the priority date of the original application. *Id.*; *see also* 4-12 CHISUM ON PATENTS ' 12.04 (2003).

invention in such detail that his future claims can be determined to be encompassed within his original creation.=@*Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) (quoting *Vas-Cath*, 935 F.2d at 1561).

This means that, to maintain the same priority date as the original application, neither an amendment to a continuation application, nor a divisional application, may add any Anew matter. 35 U.S.C. ' 132 (ANo amendment shall introduce new matter into the disclosure of the invention. ); 35 U.S.C. ' 120 (giving benefit of original application filing date under certain circumstances); *Applied Materials v. Advanced Semiconductor Materials Am.*, 98 F.3d 1563, 1579 (Fed. Cir. 1996) (Mayer, J., concurring) (ABy definition, a continuation adds no new matter and is akin to an amendment of a pending application.); 35 U.S.C. ' 121 (according original priority date to divisional application only if the divisional conforms to section 120). ANew matter@is something that describes a different invention or adds to or changes the nature of the disclosed inventions. *See, e.g., Regents of the Univ. of N. M. v. Knight*, 321 F.3d 1111, 1121 (Fed. Cir. 2003).

These requirements **B** that any amendment, continuation application, or divisional be supported by the original disclosure without any **A**new matter**@B** ensure that the inventor is limited to claiming only those inventions disclosed in the original application:

The written description requirement and its corollary, the new matter prohibition of 35 U.S.C. ' 132, both serve to ensure that the patent applicant was in full possession of the claimed subject matter on the application filing date. When the applicant adds a claim or otherwise amends his specification after the original filing date . . . the new claims or other added material must find support in the original specification.

TurboCare Div. of Demag Delaval Turbomachinery Corp. v. G E, 264 F.3d 1111, 1118

(Fed. Cir. 2001).

Thus, while the =898 application continues to be the progenitor of numerous

patents, the Patent Office has determined that each and every claim contained in these

new patents is supported by the original written description filed by Farmwald and

Horowitz in 1990. Or, to say it another way, each and every invention and the full scope

of each invention claimed by Rambus was disclosed in the written description of the =898

application (and therefore in the PCT application that became public in 1991).

2. It Is Fully Legitimate For A Patent Applicant To Amend Its Pending Claims To Cover Competitors=Products The right of an inventor to claim all of the inventions properly described in the written description of his application is not cut off because some other person begins to use the inventions before the inventor has filed a specific claim over those inventions. In other words, once the inventor has staked out his inventions in the written description of his application, the fact that someone uses one of the inventions in a competing product after the application has been filed but before the inventor claims that specific invention does not override the inventor=s entitlement to claim the invention. In fact, the Federal Circuit has explicitly held that there is nothing improper in amending a patent application to cover a competing product:

> It should be made clear at the outset of the present discussion that there is nothing improper, illegal or inequitable in filing a patent application for the purpose of obtaining a right to exclude a known competitors product from the market; nor is it in any manner improper to amend or insert claims intended to cover a competitor

cover Aa product containing a variant of the inventor=s brainstorm@is Astandard practice and has been for a long time.@ MERGES, MENELL & LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 225 (2d ed. 2000).

These principles apply in the DRAM industry as they do in any other. For example, in *Texas Instruments, Inc. v. U.S. Int= Trade Comm=n*, 871 F.2d 1054 (Fed. Cir. 1989), the patentee, Texas Instruments, amended its pending patent claims to cover a DRAM device sold by a company called MOSTEK. *Id.* at 1064-

only inventions that were disclosed in the original application, thereby preventing any sort of untoward Aabuse@of the patent process. *See Vas-Cath*, 935 F.2d at 1561 (AAdequate description of the invention guards against the inventor=s overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation.@).

 Under These Principles, It Was Entirely Legitimate For Rambus To Seek Claims Covering Technologies Promoted By Other JEDEC Members That Were Originally Disclosed in the =898 Application

The implication of these patent-law principles is that it was entirely

legitimate for Rambus to seek patent claims for inventions originally disclosed in the =898 application that were being used by JEDEC members. Under these principles, Rambus could not add ideas taken from JEDEC into its patent application **B** this would be to add new matter. Rather, Rambus could only claim **A**ideas@(i.e., inventions) that were properly disclosed in the original =898 application, i.e., **A**within [Farmwald=s and Horowitz=s] original creation.@ *Vas-Cath*, 935 F.2d at 1561.

The opposite transaction, however **B** JEDEC members **A**borrowing@ideas from Rambus=s patent application **B** was in fact possible. While patent law prevented Rambus from taking ideas from JEDEC and claiming them as its own, nothing prevented JEDEC members from taking pieces of Rambus=s disclosed inventions and incorporating

litigation, the patent holder may enforce the statutory right to exclude others from making, using, or selling the claimed invention free from liability under the antitrust laws.@ *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d 1322, 1327 (Fed. Cir. 2000). The issue of whether this statement is consistent with an antitrust theory premised on misleading a standard-setting body has not been decided. *See Intel Corp. v. Via Techs., Inc.*, 2001 WL 777085 at \*6 (N.D. Cal. 2001).

# VIII. COMPLAINT COUNSEL HAVE FAILED TO SHOW ANY ANTICOMPETITIVE EFFECTS AS THE RESULT OF ANY CONDUCT BY RAMBUS

Even if Complaint Counsel met their burden to prove that the JEDEC disclosure duty was so broad as to require Rambus to disclose its patent interests to JEDEC, Complaint Counsel would still have to prove that Rambus=s conduct caused or threatened to cause anticompetitive effects. *See, e.g., Trans Sport, Inc. v. Starter Sportswear, Inc.*, 964 F.2d 186, 188 (2d Cir. 1992) (**A**To sustain a ' 2 claim, the plaintiff must prove not only that the defendant had the power to monopolize, but also that it willfully acquired or maintained its power, thereby causing unreasonable <code>xexclusionary.=</code> or <code>xanticompetitive=effects.@(internal citations omitted)); *see also Taylor Publ=g Co.*, 216 F.3d at 474 (stating that in an attempted monopolization case, court must find threatened anticompetitive effects); *E.I. Du Pont de Nemours & Co. v. FTC*, 729 F.2d 128, 141 (2d Cir. 1984) (vacating Commission order under Section 5 regarding unilateral conduct and requiring nexus between conduct and **A**adverse competitive effects@).</code>

Anticompetitive effects cannot be inferred from proof of exclusionary conduct and intent to monopolize; the effects must be proven. *See Spectrum Sports*, 506 U.S. at 459 (reversing because **A**the trial instructions allowed the jury to infer specific intent and dangerous probability of success from the defendants=predatory conduct, without any proof of the relevant market or of a realistic probability that the defendants could achieve monopoly power in that market@); *see also Ashkanazy v. I. Rokeach* & *Sons, Inc.*, 757 F. Supp. 1527, 1540 (N.D. Ill. 1991) (holding in an attempted monopolization case that there must be a **A**causal link between the anticompetitive behavior and the dangerous probability of success@).

Complaint Counsel contend that Rambus=s conduct allowed it to gain additional market power that it would not otherwise have had. According to Complaint Counsel, this market power is manifest in Rambus=s royalty rates, which Complaint Counsel contend reflect anticompetitive hold up resulting from the alleged failure to disclose.

A. Complaint Counsel Failed To Prove That Standardization By JEDEC Enhanced Rambus=s Market Power

To sustain their monopolization claims, Complaint Counsel must prove that

Rambus=s market power flowed from the challenged conduct rather than from the superiority of Rambus=s technologies. *See, e.g., United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966) (requiring proof that defendant acquired monopoly power through anticompetitive conduct rather than a superior product). The essence of Complaint Counsel=s economic theory in this case is that JEDEC=s standardization of Rambus=s technologies enhanced Rambus=s market power. The evidence, however, shows that it did not.

 Complaint Counsel Failed To Prove That Standardization, Not The Superiority Of Rambus=s Technologies, Accounts For Rambus=s Market Power

communicate with a computer with another type of DRAM. RPF 1510. This means that compatibility requirements in the DRAM industry are not high. RPF 1510. Not surprisingly, the evidence shows that multiple standards coexist in the DRAM industry. RPF Section X.A.1.

Moreover, the evidence also shows that formal standard-setting is neither necessary nor sufficient for a standard to be successful in the DRAM industry. RPF 1513-1522. *De facto* standards, such as for Video DRAM and RLDRAM, have emerged in the industry. RPF 1514-15. Some JEDEC standards, such as Burst EDO, have failed. RPF 1516. And even the JEDEC SDRAM standard has been modified by Intel and by other industry participants because it was insufficient, leading to the PC66, PC100, and PC133 standards. RPF 1517-21. This shows that there are market participants and market forces other than formal standardization that can lead to standardization in the DRAM industry. RPF 1522. And it shows that formal standardization by JEDEC does not enhance market power. RPF 1522-24. JEDEC did not reduce the substitution possibilities of alternatives and that Rambus=s market power was unchanged by formal standard-

prohibitive in the DRAM industry, which shows that standardization of Rambus=s technologies by JEDEC did not enhance Rambus=s market power. RPF 1526.

B. Complaint Counsel Failed To Prove That The But-For World Would Have Been Any Different, *i.e.*, That The Challenged Conduct Enhanced Rambus=s Market Power

Another way of looking at the issue of market power is to ask, **A**What would have happened had Rambus made the additional disclosures? Would Rambus=s or JEDEC=s postions have been any different?@ If JEDEC would have adopted the Rambus technologies and ended paying the same royalties even had Rambus made the additional disclosures, the failure to make those disclosures could not have enhanced Rambus=s market power. RPF 1530-36. Analyzing the evidence in this manner again shows that the alleged Rambus conduct did not enhance Rambus=s market power.

Aneither monopoly power nor a dangerous probability of achieving monopoly power can exist absent evidence of barriers to new entry or expansion.<sup>@</sup> American Professional Testing Serv., 108 F.3d at 1154.

revealed preference for the four Rambus technologies would not have been changed by additional Rambus disclosures. RPF Section IX.A. The evidence also shows that, even had Rambus made additional disclosures, rational DRAM manufacturers and a rational JEDEC would have selected Rambus=s technologies because proposed noninfringing alternatives were inferior to Rambus=s technologies in cost-performance terms, even accounting for Rambus=s royalties. RPF Section IX.B.3d. And the decision tree analysis considering both JEDEC=s and Rambus=s economic incentives shows that JEDEC would have adopted Rambus=s technologies. RPF Section IX.B.4.d.

The question remains, however, whether JEDEC members would pay the same royalties in the but-for world. As discussed above, *ex ante* negotiations are highly unlikely to have occurred. That means JEDEC members and Rambus would have negotiated for licenses to Rambus=s technologies in SDRAM and DDR at the same time they did in the real world **B** after Rambus=s patents issued in 1999.

If that is the case, the question is whether there would be anything different in a world in which Rambus made the additional disclosure that would have affected these negotiations. If Rambus had made the additional disclosures and if JEDEC would have adopted the technologies without *ex ante* negotiations, the situation in the but-for world would be identical but for one possible difference. If JEDEC asked for and received a RAND letter, Rambus would have been bound by the terms of that letter. (Note that if JEDEC had proceeded without asking for RAND letter, nothing would be different.)

It is fair to ask, then, whether Rambus=s SDRAM and DDR royalty rates are reasonable and nondiscriminatory as those terms are defined by JEDEC=s RAND policy.

The evidence shows that JEDEC left it to the market (and if necessary to the courts) to define what is **A**reasonable.@ RPF Section XI.A.1. In other words, JEDEC defined reasonable as the rate to which a willing licensee and a willing licensor would agree after arms=length negotiations.<sup>63</sup> RPF 1371. With this as the measure, the evidence shows that Rambus=s SDRAM and DDR royalty rates are in fact reasonable.

A comparison of Rambus=s SDRAM and DDR royalty rates with other royalty rates in the DRAM industry and in the semiconductor industry in general shows that Rambus=s rates are reasonable. For instance, the IBM WorldwM World.2e, 7TD 0 T0aanEt JEDT0 rate in our industry and generally meets the requirement of standards organizations that licenses be made available on reasonable and nondiscriminatory terms and conditions.

RPF 1380. Digital Equipment Corporation notified JEDEC in a RAND letter that it would seek a 1% royalty for certain patents. RPF 1384. Kentron sought the equivalent of a 5% royalty for its FEMMA patents and the price of its QBM products reflected approximately a 9% charge for its patented technology. RPF 1385. Hyundai and Samsung paid patent royalties to Texas Instruments of 8% and 9%, respectively, on the DRAM they produced. RPF 1387-88. Other data on patents in the semiconductor industry shows average royalty rates to be about 4.5%. RPF 1389-90. Because cross-licensing is prevalent in the semiconductor industry, these rates are likely lower than the rates would be for a straight patent license. RPF 1394. Rambus=s rates are in the middle to low end of these DRAM industry and semiconductor industry rates. RPF 1392.

The only evidence that Complaint Counsel proffered on the issue of the level of Rambus=s royalty rates was a comparison of Rambus=s DDR rate with its RDRAM rate. Based on this comparison, Professor McAfee opined that Rambus=s DDR rates **A**reflected hold up.@ He did *not* offer any opinion regarding Rambus=s SDRAM royalty rate.

The evidence shows, however, that Rambus=s DDR licenses are not comparable Rambus=s RDRAM licenses. RPF 1398-1402. {IN CAMERA MATERIAL REDACTED}

#### [946564.1]

[946564.1]

The evidence at trial, however, shows that Rambus=s charging a higher rate to a party that litigates before licensing is not discriminatory. Rambus offered the same royalty rates to all potential licensees, including Hitachi and the other DRAM manufacturers that have chosen to litigate. RPF 1403. Complaint Counsel=s economic expert admitted that these offers were nondiscriminatory. RPF 1403.

Moreover, demanding a slightly higher royalty from a party that insists on litigation is not discriminatory in an economic sense. A higher rate is justified for a number of reasons. First, **{IN CAMERA MATERIAL REDACTED}** RPF 1414. Second, **{IN CAMERA MATERIAL REDACTED}** RPF 1415. Third, **{IN CAMERA MATERIAL REDACTED}** 

#### RPF 1416. {IN CAMERA MATERIAL REDACTED}

RPF 1417. Simply put, the notion that it is somehow inappropriate to charge higher royalties to parties that insist on litigation before licensing defies both economic analysis and common sense.

In the end, the but-for world outcome is the same as the actual world outcome. This means that Rambus=s conduct did not cause it to gain additional market power. RPF Section XII.B.2. It therefore follows that competition has not been adversely affected by the alleged failure to disclose. RPF Section XII.B.2. Complaint Counsel has failed to prove an essential element of its case.

### [946564.1]

### IX. CONCLUSION

When this case commenced, the Astory@was that Rambus had concocted a complicated, clever and devious scheme to ensnare JEDEC and its members in Rambus=s patent trap. We know now that this Astory@B like most urban legends B is fiction. Rambus did <u>not</u> launch a plan to evade JEDEC=s disclosure rules and entice JEDEC into adopting technologies over which Rambus hoped to obtain patent claims.

Instead, we find that JEDEC did not have any rules that required the disclosure of patent applications, or even of patents. We know this from the contemporaneous evidence of manuals and other documents from EIA, JEDEC and ANSI, from what was written by JEDEC members at the time, and from a consistent course of conduct by JEDEC and its members. When cross-examined **B** the centuries= old tool for seeking truth **B** we also find that no two proponents of a mandatory JEDEC disclosure duty could agree on the scope of that supposed duty, leading inevitably to the conclusion that the contemporaneous evidence is correct: such a duty simply did not exist. We also find that Rambus did not possess any patents or patent applications that JEDEC=s rules, even as interpreted by Complaint counsel, required it to disclose.

But we learned even more. We learned that JEDEC and its members had actual knowledge of the nature and scope of the patents that Rambus was hoping to obtain. We learned that they studied Rambus=s issued patents and its WIPO application. We learned that they traded observations and assessments of the strength of Rambus=s intellectual property, and that they persuaded themselves that Rambus=s patents would not issue, or would not be valid, because of the prior art. We also learned that Rambus=s founders, Drs. Farmwald and Horowitz, had indeed solved the memory bottleneck problem in the very best way it could be solved, and that it was the genius of their soluts **1Ns pthet** 4 Tw (sptlut)ATc 0.4.88 -30.72 TD -0.0079 Tc 378 Tc -0.c197rt. W38l pr12.96

A. Douglas Melamed Kenneth A. Bal

### UNITED STATES OF AMERICA BEFORE THE FEDERAL TRADE COMMISSION

In	the	Matter	of
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RAMBUS INCORPORATED, a corporation.

Docket No. 9302

## **CERTIFICATE OF SERVICE**

I, Jacqueline M. Haberer, hereby certify that on September 9, 2003, I caused a true and correct copy of the public version of the *Initial Post-Trial Brief of Respondent Rambus Inc.* to be served on the following persons by hand delivery:

Hon. Stephen J. McGuireM. Sean Royall, Esq.Chief Administrative Law JudgeDeputy Director, Bureau of CompetitionFederal Trade CommissionFederal Trade CommissionRoom H-112Room H-372600 Pennsylvania Avenue, N.W.600 Pennsylvania Avenue, N.W.Washington, D.Cto 20580 () Tij 364 or TED () Tij 366 Or DDD (1) 3966 Or DD (1) 3966 Or DDD (1) 3966 Or DDD (1) 3966 Or DD (1) 3966 Or DDD (1) 3966 Or DD (

**PUBLIC** 

## UNITED STATES OF AMERICA BEFORE THE FEDERAL TRADE COMMISSION

In the matter of

**RAMBUS INC.,** 

Docket No. 9302

a corporation.

## **CERTIFICATION**

I, James M. Berry, hereby certify that the electronic copy of *Initial Post-Trial Brief* of *Respondent Rambus Inc*. (Public) accompanying this certification is a true and correct copy of the paper original and that a paper copy with an original signature is being filed with the Secretary of the Commission on September 9, 2003 by other means.

DATED: September 9, 2003

James M. Berry