ORIGINAL

UNITED STATES OF AMERICA
BEFORE FEDERAL TRADE COMMISSION

Docket No. 9302

PUBLIC

In the Matter of

RAMBUS INCORPORATED

COMPLAINT COUNSEL'S
REPLY BRIEF ON REMEDY

Jeffrey Schmidt
Director

Daniel P. Ducore
Assistant Director, Compliance Division

Rendell A. Davis, Jr.
Attorney, Compliance Division

Geoffrey D. Oliver
Richard B. Dagen
Robert P. Davis

Counsel Supporting the Complaint

Bureau of Competition
Federal Trade Commission
Washington, DC 20580

Dated: September 29, 2006

TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

OTHER AUTHORITIES

PUBLIC

UNITED STATES OF AMERICA
BEFORE FEDERAL TRADE COMMISSION

In the Matter of RAMBUS INCORPORATED, a corporation.	Docket No. 9302

COMPLAINT COUNSEL'S REPLY BRIEF ON REMEDY

INTRODUCTION

> *A public interest served by such civil suits is that they effectively pry open to competition a market that has been closed by defendants' illegal restraints. If this decree accomplishes less than that, the Government has won a lawsuit and lost a cause.*
>
> *International Salt Co. v. United States, 332 U.S. 392, 401 (1947)*

Starting from an incorrect position of law, and relying on false assumptions of fact, Rambus has rendered its brief irrelevant. The law provides that, to the extent possible, the Commission must restore competitive conditions that likely would have prevailed absent Rambus's conduct. The facts overwhelmingly confirm that, absent Rambus's deception, JEDEC's standards today would be free of Rambus's patent claims. The unsupported and unreliable opinions of Rambus's experts should be disregarded, but even they demonstrate that, had JEDEC used Rambus technologies, JEDEC members likely would have negotiated Rambus's royalties effectively down to zero.

I. Restoring Competitive Conditions Is Central To The Commission's Remedial Powers

A. The Commission Has the Power To Enjoin Patent Enforcement or Restrict Royalties To Restore Competition

Well-settled precedent confirms the Commission's authority to "cure the ill effects of the illegal conduct." *United States v. U.S. Gypsum Co.*, 340 U.S. 76, 88 (1950); Complaint Counsel's Brief ("CCB") 3-4. Rambus's contention that the Commission's power is limited to ordering a respondent to refrain from repeating unlawful conduct, Respondent's Brief ("RB") 4-6, flies in the face of relevant precedent. *See, e.g., Ekco Prods. Co.*, 65 F.T.C. 1163, 1216 (1964), *aff'd sub nom. Ecko Prods. Co. v. FTC*, 347 F.2d 745 (7th Cir. 1965); *FTC v. National Lead*, 352 U.S. 419, 430 (1957) (Commission must assure that a violator will "relinquish the fruits of his violation."); *see also New York v. Microsoft Corp.*, 224 F.Supp.2d 76, 148 (D.D.C. 2002) ("equitable relief beyond a mere injunction against repetition of the act is generally appropriate. [quoting Areeda & Hovenkamp] . . . [T]he Court finds unpersuasive Microsoft's argument that Plaintiffs are entitled to no more than a simple proscription against the conduct found to violate the antitrust laws."), *aff'd sub nom Massachusetts v. Microsoft Corp.*, 373 F.3d 1199, 1232 (D.C. Cir. 2004). Applicable precedent requires that the Commission restore competition and deprive the wrongdoer of the fruits of its anticompetitive conduct. CCB 3-4.[1]

[1] *See also Orkin Exterminating Co.*, 108 F.T.C. 263, 368 (1986) (Commission's Section 5 consumer protection cease and desist order "result[ed] in a roll back . . . of the annual renewal fees on all of Orkin's pre-1975 contracts."), *aff'd, Orkin Exterminating Co. v. FTC,* 849 F.2d 1354 (11th Cir. 1988).

B. Rambus Bears the Burden of Any Uncertainty Resulting from Its Unlawful Conduct

The Commission found the requisite link between Rambus's deception and its acquisition of monopoly power to establish liability. Decision 74, 118-119. Any remaining doubts regarding remedy must be resolved against Rambus. CCB 9-11. Rambus, however, asserts that this case is akin to those which require "a clearer indication of causal connection" at the remedy phase. RB 7. Areeda & Hovenkamp and *Microsoft,* upon which Rambus relies, say the opposite.

Rambus maintains that "affirmatively to reduce the defendant's market power" requires a "clearer indication of causal connection between the creation or maintenance of the market power." RB 7. Rambus misuses a principle important primarily in monopoly <u>maintenance</u> cases. A company that lawfully acquires a monopoly, and then engages in unlawful conduct reasonably likely to maintain that monopoly, should not be subject to divestiture or complete deprivation of patent rights absent a showing that the remedy is linked to the anticompetitive effects of the conduct. Absent such a link, depriving a monopolist of lawfully-acquired monopoly power can restrict pro-competitive incentives. Conversely, monopoly <u>acquisition</u> cases are less likely to deprive a monopolist of its legitimate market position.

The Areeda & Hovenkamp section relied on by Rambus is straightforward: where a company lawfully gains a monopoly through "a succession of brilliant innovations," a subsequent unconsummated attempt to acquire a new entrant is insufficient to justify breaking up the pre-existing monopoly. III Areeda & Hovenkamp, *Antitrust Law* ¶ 653b (2005). The subsequent unlawful conduct is unrelated to the pre-existing lawful monopoly, and the remedy should be limited to offsetting the likely anticompetitive effects of the unlawful conduct, "leav[ing] the monopoly as it was before" resting on competitive merit. *Id.*

The *Microsoft* decision, applying the treatise, presents a more complex, yet similar situation. Microsoft developed the Windows operating system and the Internet Explorer browser lawfully, through its own innovation. Microsoft was found liable of excluding effective competition from middleware, *Microsoft,* 373 F.3d at 1228-29, conduct that reasonably appeared capable of making a significant contribution to maintaining Microsoft's operating software monopoly. *United States v. Microsoft*, 253 F.3d 34, 79 (D.C. Cir. 2001). Massachusetts sought an order requiring Microsoft, *inter alia*, to "grant a royalty-free . . . right" to use the source code for Internet Explorer (the "open-source IE" provision). *Microsoft*, 373 F.3d at 1227-28. The government, however, had failed to prove that Microsoft had attempted to monopolize the browser market or tied the browser to the operating system. *Microsoft*, 253 F.3d at 46. Thus, the government argued, in light of "the *viable claims* remaining after the Court of Appeals' decision, . . . remedial measures targeted at Internet Explorer are unsupportable." Response of the U.S. to Public Comments on the Revised Proposed Final Judgment 12 ¶ 22 (D.D.C., Civil Action No. 98-1232, Feb. 27, 2002). The court agreed, affirming the district court finding that the proposed relief – depriving Microsoft of <u>lawfully</u>-acquired royalties for IE – was not sufficiently connected to the violation. *Microsoft*, 373 F.3d at 1228-30. In a nutshell, the courts found that the proposed remedy of royalty-free licensing of IE "ignores the theory of liability in this case." *Id.* at 1229.[2]

A subsequent paragraph of Areeda & Hovenkamp – not cited by Rambus – confirms that,

---

[2] *See* 373 F.3d at 1230 (relief designed to "eliminate the monopoly altogether" requires a stronger "causal connection between Microsoft's anticompetitive conduct and its dominant position in the . . . market [for operating systems]").

even in monopoly maintenance cases, more extensive relief is justified as the link between the conduct and the monopoly increases. "When a monopolist has consummated an exclusionary act . . . [w]e must also try to undo the various effects of that act." *Antitrust Law* ¶ 653c. In the accompanying example, the monopolist actually buys its only rival. The treatise explains that a simple cease-and-desist order would be ineffective, and more extensive measures would be appropriate to restore competitive conditions. Indeed, "one might force the monopolist to fashion out of its assets a viable firm that would bear the 'same relationship' to itself as [the target company] bore at the time of acquisition." *Antitrust Law* ¶ 653c1. In that specific context, the treatise notes:

> **the monopolist bears the risk of the uncertain consequences created by its exclusionary acts**. Thus, at the least, **equitable relief** properly goes beyond merely "undoing the act; the proper relief is **to eradicate all the consequences of the act** and provide deterrence against repetition; and any **plausible doubts should be resolved against the monopolist**.

Id. (emphasis added). Notably, in this example, extensive relief is mandated despite "plausible doubts" about the causal link to the monopoly position. (No such doubts are present here).

In short, if the link between the conduct and the harm is established during the liability phase, any doubts regarding the remedy are resolved against the wrongdoer, even where structural relief may be necessary to assure that complete relief is obtained. CCB 9-11. Here, the Commission found the requisite link between Rambus's exclusionary conduct and its acquisition of monopoly power. Decision 74, 118-119. Thus, the causation finding here was not "edentulous" as in *Microsoft.*

In addition to the link between conduct and the acquisition of monopoly power, the nature of the conduct also influences whether "reasonable royalties . . . [are] but nominal in value."

United States v. National Lead, 332 U.S. 319, 349 (1947). For example, royalty-free licensing in a price-fixing or market allocation case would clearly bestow a windfall on the plaintiffs. No consumer could have expected, but for the conduct, that the intellectual property would have been free. On the other hand, under the present facts (as with cases involving equitable estoppel and laches), a zero-royalty remedy flows directly from Rambus's misconduct. CCB 12, n. 11. JEDEC members reasonably expected that JEDEC standards would be free of Rambus's patent claims. Amicus Curiae Brief of JEDEC 4-9. Because the facts demonstrate that "but for" the conduct, royalties for JEDEC-related applications would be zero or "nominal," the relief does not "confiscate" any rewards to Rambus's innovation. *Cf. Microsoft*, 373 F.3d at 1230. In short, finding that Rambus is entitled to zero or, at most, nominal royalties with respect to JEDEC-compliant products (while still allowing full compensation for other uses) is fully supported by the *Microsoft* decisions and the Antitrust Treatise.[3]

C. A Zero Royalty for JEDEC-Compliant Products and Unlimited Royalties for Non-JEDEC Uses Is Reasonable

The proposed remedy restores competitive conditions to JEDEC standards, while permitting Rambus to collect unlimited compensation for its innovation on all non-JEDEC uses. Rambus's contention that requiring royalty-free licensing for JEDEC-compliant uses would be punitive and amount to a forfeiture, RB 5-8, is wrong on the law and the facts.

Since the *Hartford-Empire* decision relied upon by Rambus, courts have explained that royalty-free licensing is sometimes appropriate. *See, e.g,* CCB 11-12; *United States v. General*

[3] In arguing that the proposed remedy would "confiscate" royalties to which Rambus believes itself entitled, Rambus hopes the Commission will ignore Rambus's wholesale spoliation of evidence and other litigation misconduct (which already led one court to bar Rambus from enforcing its patents). Decision 19.

Electric, 115 F. Supp. 835 (D.N.J. 1953) (requiring public dedication of patents). In the remand in *United States v. Singer*, while rejecting royalty-free licensing in that case, the court examined the relevant authority to that point and explained that:

> The test . . . which runs through the majority opinions and dissents in the *Hartford-Empire* and *National Lead* cases and the only one which must guide the Court in framing an anti-trust decree is what measure must be applied in order to dispel the evil effect of the defendant's wrongful conduct -- which means what will restore competition.

231 F. Supp. 240, 244 (S.D.N.Y. 1964). In short, a royalty-free licence is remedial, not punitive, because it is necessary "to dispel the evil effect" of Rambus's misconduct.

Rambus also obscures a critical fact – the proposed remedy permits Rambus reasonable compensation for its intellectual property. In contrast to the open-source IE proposal in *Microsoft*, the proposed remedy here would allow Rambus unlimited compensation for its innovation in all uses unaffected by its unlawful conduct. It would prohibit only collection of royalties (which it otherwise would have been unable to collect) for the applications affected by its unlawful conduct.

Rambus argues that, even with unrestricted royalties on all other uses, a zero royalty on JEDEC-compliant uses would be harsh given that "relevant legal authorities, and in particular the Commission's consent order in the *Dell* case, are of relatively recent vintage and largely post-date Rambus's conduct." RB 8. This call for leniency fails for at least two reasons. First, the Commission found the conduct here to be substantially more egregious than that alleged in *Dell.* Rambus acted intentionally to implement its scheme over a period of years; Dell's single act was "not inadvertent," but not necessarily intentional. *Dell Computer Corp.,* 121 F.T.C. 616, 625-26 (1996); *also* 628-29 (Commissioner Azcuenaga, dissenting: "obtain[ing] market power by knowingly or intentionally misleading a standards-setting organization" presents a "routine antitrust case").

Second, Rambus's implication that, at the time of its conduct, it could not have anticipated that it risked forfeiting the enforcement of its patents, is contradicted by the record. From the outset, Rambus consulted with its lawyers about the possible consequences of its conduct. CX1941 ("JEDEC – said need preplanning before accuse others of infringement"). Repeatedly during the next four years, Rambus's lawyers told Rambus representatives point-blank – Rambus's conduct could result in the non-enforceability of its patents. CX1942 (Vincent: "I said there could be equitable estoppel problem"); CX1958 at 12 ("Two possible theories for non-enforcement: 1) Estoppel? 2) Antitrust?"); CX3126 at 552-54; CX0837 at 1 (Crisp: "Tony's worst case scenario regarding estoppel"). Despite that advice, and with full knowledge of the consequences, Rambus intentionally embarked on the deceptive course of conduct leading to the Commission's liability finding. Rambus can hardly complain today about being held to precisely the remedy that its lawyers predicted.

D. The Commission Should Resist the Temptation To Impose Punitive Relief

Complaint Counsel acknowledge the persuasive arguments in support of a stricter remedy. *See* Brief of Amici Curiae, Gesmer Updegrove LLP and Andrew Updegrove at 2-3. SSO members may recognize that, if by deceiving an SSO they can collect monopoly rents for years, and thereafter be restored to prior conditions, there would be no down-side to the deception. *Id.* at 5. Failure to punish Rambus might "shake the faith of the members of SSOs in the voluntary consensus standards development process." *Id.* at 12. Many SSOs may be disappointed that the proposed relief does not go far enough. *Id.* at 14.

Complaint Counsel nevertheless urge the Commission to adopt a traditional, limited antitrust remedy clearly within its well-defined powers. Despite Rambus's windfall gains during the past six years and the possibility of perverse incentives in SSOs, the Commission's primary objective (as explained above) should be to restore competitive conditions and protect consumers going forward.

II. Enjoining Enforcement Of Rambus's Relevant Patents Against JEDEC-Compliant Products Is Appropriate

A. Absent Rambus's Deception, Competitive Conditions Would Have Been A Series of JEDEC Standards Free Of Rambus Patents

The record demonstrates that, absent Rambus's deception, JEDEC standards would be free of Rambus's patent claims. CCB 4-6; CCFF 2101, 2435-40. Rambus errs in asserting that it is entitled to compensation for the incremental value of its patents because (it claims) JEDEC members would have paid Rambus for its technologies. RB 10-12. Likewise, Rambus's argument that the Commission should credit Rambus's retained experts, Mr. Geilhufe and Dr. Rapp, to justify a 2.5% royalty rate, *id.* 23-25, is baseless.

Rambus's arguments are based on false assumptions. Rambus ignores the fundamental starting point – the concrete factual record of what competitive conditions likely would have prevailed in the absence of its deception.[4] Rambus's unfounded assumptions include:

1. *Rambus would have made a RAND commitment.* The evidence is unequivocal: Rambus refused to give a RAND commitment. CCFF 1091; CX0490; CX0869; Tr. 6223-24

---

[4] Even assuming *arguendo* doubts were not resolved against the wrongdoer during the remedy phase and Complaint Counsel must establish the appropriate relief by a preponderance of the evidence, Complaint Counsel have already done so. CCB 4-9; *infra* 10-14.

(Diepenbrock). This was not mere oversight or misunderstanding; it was a calculated position. Rambus representatives regarded RAND as contrary to Rambus's entire business model. CX0873 ("Rambus Inc. cannot agree to the terms of the JEDEC patent [licensing] policy"); CX0874 ("the patent [licensing] policy of JEDEC does not comport with our business model"); Tr. 6228-29 (Diepenbrock: "RAND terms [were] inconsistent with Rambus' existing business practices"); CX2112 at 213 (Mooring); CX3129 at 488-89 (Vincent); CX2083 at 98 (Davidow). And absent a RAND commitment, JEDEC could not have adopted Rambus's technologies. CX0203A at 11; JX0054 at 9; CX0208 at 19; Tr. 1868-69, 1884-86, 1895-96, 1907-08 (Kelly). Absent Rambus's deception, JEDEC standards would have been free of Rambus's patent claims.

2. *JEDEC members would have been satisfied with a RAND commitment from Rambus.* JEDEC members were focused on minimizing cost. They were particularly concerned about patents held by non-manufacturing companies, such as Rambus, because they would demand cash royalties rather than cross-licenses.[5]

3. *JEDEC members would have engaged in a detailed cost comparison of alternatives.* Rambus argues, based solely on the theories of its retained experts, that JEDEC members would have calculated static, down-to-the-penny cost projections, fifteen years into the future, of Rambus's technologies versus alternatives. Rambus presents no factual evidence that JEDEC actually did this. In fact, there were multiple reasons why JEDEC did not. Rambus's own experiences with its RDRAM show:

---

[5] Rambus's claims that JEDEC never rejected a patented technology if the patent-holder offered a RAND commitment, RB 12 n. 9, is simply untrue. *See* Tr. 5046-49 (Kellogg: IBM, Cypress, Kentron and Hyundai technologies rejected despite RAND offer); CX3135 at 104-06 (Chen: Mitsubishi technologies rejected).

(A) Cost projections were extremely difficult and subject only to very rough estimates. Cost projections were often rounded plus-or-minus 10%.

(B) Costs typically dropped dramatically over time. *See* CX2747 at 68 (RDRAM cost disadvantage dropping from 80% to 30-40% from 1H99 to 2H00).[6] As a result, cost projections rarely extended over more than 1-2 years.

(C) Cost projections varied widely from company to company; a single company often presented a wide range of possible outcomes. RX-1525 at 19 (Rambus Q400 cost gap scenarios (RDRAM to PC100) ranging from $8.74 to $19.71).

In sum, Mr. Geilhufe's calculations of uniform, static, pennies-per-chip cost differences among alternatives was completely irrelevant to JEDEC's processes. Tr. 9622 ("I don't even know whether the questions I was asked to answer were ever asked at JEDEC"); 9674 ("I have no knowledge of how JEDEC folks did their analysis"). Dr. Rapp's conclusions, relying on Mr. Geilhufe's numbers to opine on the "but-for" world, are therefore equally flawed and rendered irrelevant. The factual record establishes that, absent Rambus's deception, JEDEC members simply would have selected a generally acceptable alternative. Decision 74 n. 403 (JEDEC dropped loop-back clock proposal because of Rambus patent concerns and pursued alternatives without any detailed cost comparison); Tr. 1416-17 (Sussman); Tr. 9022-23 (Prince); Tr. 6635-36, 6717, 6686 (Lee); Tr. 5136, 5146, 5170, 5187 (Kellogg); CX2107 at 137 (Oh); CX2058 at 371-72, 440-41 (Meyer).[7]

---

[6] *Cf.* Decision 95 ("Rapp's calculations, like Geilhufe's estimates, wholly ignore several possibilities for cost reductions from adoption of the alternative technologies.").

[7] Dr. McAfee (who unlike Mr. Geilhufe and Dr. Rapp studied the record extensively) explained that JEDEC members followed a decision-making process known as "satisficing." Because of the many uncertainties involved, time-to-market concerns and the importance of reaching consensus, JEDEC members did not try to conduct detailed comparisons of each set of alternatives to identify the very best, but rather settled on an acceptable compromise and moved on. Tr. 7255-56.

4. *Cost comparisons would have shown that, on a value-adjusted basis, Rambus's technologies were less expensive than alternatives.* Rambus relies solely on the opinion of Mr. Geilhufe to argue that the Rambus technologies were more cost-effective than alternatives. Mr. Geilhufe's conclusions, however, are fatally flawed and unreliable.

– He lacked the experience necessary to render such an opinion. Tr. 9625-9626 ("Q. And your last hands-on DRAM design experience was in 1978. Is that right? A. 1978, I – that is correct."); 9550-9551 (1988-1998, worked for ISD, a fabless company with no manufacturing); 9628-9631 (1999-2000 experience at Winbond consisted of analyzing how outdated 14-year-old DRAM fabs could be used to manufacture other products).

– He failed to review any JEDEC records, interview any JEDEC members, or (with very few exceptions) review the deposition or trial testimony of relevant witnesses. Tr. 9619-9623 ("Q. You never reviewed any JEDEC meeting minutes? A. I did not. . . . I never spoke to a JEDEC member.").

– He admitted he lacked cost documents and other information from DRAM manufacturers essential to accurate calculations. Tr. 9617-9618 ("wanted to see cost documents from a number of companies," but they weren't available); 9666-9667 (never asked to obtain DRAM manufacturers' cost information).

– He had no identifiable methodology, let alone one with general acceptance among DRAM designers and manufacturers. Tr. 9622 ("Q. Now, what did you do to ensure that the analysis that you did was the type of analysis that's done at JEDEC? A. I did not do anything. I did my analysis . . .").[8]

– The sources of his information cannot be identified, and his calculations cannot be reconstructed. Tr. 9711-9715 (he couldn't remember the manufacturers or part numbers of components for which he collected cost information; "I believe I specified one or two companies, and the others I didn't recall.").

---

[8] Whether a method "'has been subjected to peer review'" and "enjoys 'general acceptance' within a 'relevant scientific community'" are factors in determining the reliability of an expert opinion. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 149-150 (1999) (citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 592-594 (1993)).

– He admitted that he had no way to test or verify his opinions. Tr. 9665-9666.[9]

– DRAM manufacturers (his only potential source of verification) contradicted his opinions. Tr. 9666 (if alternatives were implemented, asking a DRAM manufacturer would be one way to verify his opinions); 9680-9691 (Dr. Peisl of Infineon disagreed with Mr. Geilhufe's opinions); Tr. 10995-11009, 11012-11019, 11024-11038, 11040-11042 (Mr. Lee of Micron disagreed with Mr. Geilhufe's assumptions and opinions); *see also* Tr. 9667 (Geilhufe "cannot speak for the actual costs at a DRAM manufacturer").[10]

– His opinions require finding that IBM, Intel, Texas Instruments, Samsung, Mitsubishi, Sun Microsystems, Micron, Silicon Graphics and Cray, among others, acted irrationally by deliberately proposing or supporting allegedly inferior and more expensive technologies at JEDEC. CC Appeal Brief 91-95.

For all of these reasons, the Commission should disregard entirely the testimony of Mr. Geilhufe and Dr. Rapp (who relied on Mr. Geilhufe) as unreliable, and find that JEDEC would have adopted alternative technologies based on contemporaneous documents, the testimony of JEDEC members, and the actual experience relating to the loop-back clock in March-April 1997. Decision 74.

5. *JEDEC members would not have negotiated Rambus royalties down to zero.* Even if the Commission were to find (contrary to the factual record) that Rambus would have offered a RAND commitment, JEDEC members would not have adopted alternatives, but rather would have performed detailed, down-to-the-penny calculations extending over the 15+ year expected life of Rambus patents, and that Mr. Geilhufe's methodology is a reliable basis to support the

---

9 Reliability of an expert opinion may also depend on whether it "'can be (and has been) tested'." *Kumho Tire*, 526 U.S. at 149.

10 A "high 'known or potential rate of error'" may be indicative of unreliability of an expert opinion. *Kumho Tire*, 526 U.S. at 149. Mr. Geilhufe's error rate is unknown, since his opinions can't be tested. His potential error rate is high, as DRAM manufacturers are the only possible source of verifying his opinions and representatives of DRAM manufacturers rejected his opinions.

Commission's remedy findings, Mr. Geilhufe's own calculations (adjusted by the Commission to reflect the factual record) demonstrate that the marginal value of the Rambus technologies over available alternatives was zero. *See* CCB 6-9.

The Commission should disregard the testimony of Rambus's experts as unreliable and irrelevant. The factual evidence (as opposed to theories and assumptions) establishes that, absent Rambus's deception, the JEDEC standards today would be free of Rambus's patent claims. CCB 4-9.

B. To Restore Competitive Conditions and Permit Effective Administration, The Remedy Must Apply To All Technologies in the JEDEC Standards

An effective remedy must address all nine markets potentially impacted by Rambus's deception, CCFF 3113-3182, and be capable of implementation without detailed review of complex technical issues and patent claims. Rambus's argument that the remedy should be limited to the four markets in which Rambus has successfully acquired monopoly power, RB 9-10, fails on both counts.

Rambus would ensure that the greater the deception against an SSO, the weaker the remedy. A malfeasant that deceived an SSO regarding multiple technologies could ensure that any remedy would be inadequate by enforcing with respect to only one technology at a time. Any remedy would be limited only to that one market, permitting the perpetrator immediately to sue on the next technology. To the extent that the perpetrator were successful in compelling companies to sign license agreements, the payments would continue throughout a series of fruitless Commission enforcement actions. No situation could better explain the Supreme Court's statement that the Commission's authority "is not limited to prohibiting the illegal practice in the precise form in which it is found to have existed in the past," but extends to such other provisions as may be necessary to "close all roads to the prohibited goal, so that its order may not be by-passed with impunity." *FTC v. Ruberoid Co.*, 343 U.S. 470, 473 (1952); *accord, International Salt,* 332 U.S. at 400 ("it is not necessary that all the untraveled roads to that end be left open and that only the worn one be closed."); *see also United States v. National Lead*, 332 U.S. at 335-36, 348-49 (broad relief included later acquired patents and patents for which the defendant in the future received an exclusive license.).

Additionally, a market-specific remedy would be difficult to administer. Any defendant believing that a Rambus enforcement action was based on a patent claim in one of the relevant markets could complain to the Commission, asking it to interpret the claim and determine whether Rambus had violated the order.[11] The complexity of the necessary claim interpretation would be compounded for claims combining elements based on multiple technologies.

---

[11] As merely one example, if Rambus were to try to enforce its 5,915,105 patent against JEDEC-compliant products, the Commission would have to determine whether claim 10 was within the scope of its order:

> A memory device comprising: . . . an output driver having an output coupled to the bus, an input coupled to the output of the multiplexer, the output driver for driving data on the bus in response to the output of the multiplexer; and wherein the multiplexer couples the first output line to the output of the multiplexer in response to the first internal clock to provide even bus cycle information to the bus, and couples the second output line to the output of the multiplexer in response to the second internal clock to provide odd bus cycle information to the bus.

CX1516 at 30.

III. Rambus's Proposed Royalty Rates Are Palpably Unreasonable

Complaint Counsel agree with Rambus on one critical principle: the Commission normally avoids direct price regulation. RB 15. The Commission protects the integrity of markets and allows markets to determine prices. The Commission has neither the role nor the ability to regulate prices. This is precisely why the Commission should avoid trying to set a royalty rate for Rambus's technologies.

Rambus nevertheless argues that the Commission should regulate Rambus royalties at a level of at least 2.5%. RB 14-25.[12] Rambus relies primarily on a single agreement – the Rambus-Hyundai RDRAM agreement – to justify its proposal. *Id.* 17-18. Rambus grossly mischaracterizes this agreement. Hyundai did not initiate negotiations in response to a RamLink/SyncLink-related warning from Rambus. *Id.* 17. In fact, Rambus and Hyundai commenced negotiations for an RDRAM license in early 1995. *See* CX0782; CX0711 at 61-62. The "Other DRAM" provision was included in the resulting RDRAM license. CX1599 at 2, 3, 24.

The Rambus-Hyundai RDRAM agreement does not represent the likely outcome absent Rambus's deception. Indeed, this agreement was also a product of Rambus's deception. Although internally, Rambus had identified five specific technologies potentially covered by its

[12] Rambus's argument that, pursuant to reasonable and non-discriminatory terms, it should be permitted to discriminate against those who challenge patent validity, RB 13-14, has no record support. Given the technological alternatives available, there is no reason why JEDEC members would have accepted a RAND proposal that excluded any company that chose to challenge the validity of Rambus's patents. The Commission should resist Rambus's efforts to use it as a weapon to compel companies to abandon potentially pro-competitive challenges to the validity of Rambus's patents. *See* "To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy" at 5-18 (October 2003) (recommending legislation to permit challenges to patent validity based on a preponderance of the evidence).

patents, it refused to "alert them to a potential problem they can easily work around." CX0711 at 73. Instead, Rambus merely stated vaguely that unspecified patents might cover undisclosed aspects of Synclink. RX-0663 at 2. Thus, Hyundai had no opportunity to assess the veracity and strength of Rambus's claim, to avoid Rambus patents by proposing specific alternatives within SyncLink, or to negotiate with alternatives in mind. Many companies thought the changes from RamLink to SyncLink (shifting from a fully to a partially multiplexed bus architecture) would be sufficient to avoid Rambus's patents. CCFF 1571. Hyundai used the opportunity of the on-going RDRAM negotiations to obtain "insurance" in case it turned out that Rambus's patents did cover SyncLink. CCFF 1550-1552. Because of the vagueness of the information and the technological changes to SyncLink, Hyundai never thought the 2.5% rate would ever apply. CCFF 1552.

Rambus also relies on its assertion that a hand-picked selection of a limited number of license agreements, for an unknown number of unspecified patents relating to unknown technologies used in unidentified products, carried royalty rates in excess of 3.5%. RB 18-20. The Commission already rejected this argument. Decision 115 n. 624 (comparing licenses for different technologies "mixes 'apples and oranges';" "Rambus fails to provide a basis for treating the referenced licensing arrangements as comparable to licenses for the technologies at issue in the present case."). Similarly, the Commission already dismissed Rambus's attempt to rely on a vague, abstract and unsupported passage in an IBM manual. *Id.* ("The record contains no evidence, however, that IBM's rates reflected royalties for DRAM technologies, or even that the rates stated in IBM's policy ever actually applied," and noting that, unlike Rambus's DRAM-wide royalty rates, IBM's policy potentially applies only to the fraction of the price attributable to the patented portions of the product.).

For the forgoing reasons, Complaint Counsel respectfully requests that the Commission enter its proposed order.

Respectfully submitted,

Geoffrey D. Oliver
Richard B. Dagen
Robert P. Davis

Counsel Supporting the Complaint

Jeffrey Schmidt
Director

Daniel P. Ducore
Assistant Director, Compliance Division

Rendell A. Davis, Jr.
Attorney, Compliance Division

Bureau of Competition
Federal Trade Commission
Washington, D.C. 20580

Dated: September 29, 2006

CERTIFICATE OF SERVICE

I, Beverly A. Dodson, hereby certify that on September 29, 2006, I caused a copy of the attached, *Complaint Counsel's Reply Brief On Remedy*, to be served upon the following persons:

by hand delivery to:

The Commissioners
U.S. Federal Trade Commission
Office of the Secretary, Room H-135
Federal Trade Commission
600 Pennsylvania Ave., N.W.
Washington, D.C. 20580

by electronic transmission and courier to:

A. Douglas Melamed, Esq.
Wilmer Cutler Pickering Hale and Dorr LLP
1875 Pennsylvania Avenue, N.W.
Washington, DC 20006

and by electronic transmission and overnight courier to:

Steven M. Perry, Esq.
Munger, Tolles & Olson LLP
355 South Grand Avenue
35th Floor
Los Angeles, CA 90071

Counsel for Rambus Incorporated

Beverly A. Dodson

Beverly A. Dodson