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UNITED STATES OF AMERICA
BEFORE THE FEDERAL TRADE COMMISSION

COMMISSIONERS: Deborah Platt Majoras, Chairman
Pamela Jones Harbour
Jon Leibowitz
William E. Kovacic
J. Thomas Rosch

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

REPLY BRIEF OF RESPONDENT RAMBUS INC., ADDRESSING ISSUES RELATING TO REMEDY

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INTRODUCTION

The parties agree on three points. First, while the parties disagree about whether the Commission can enter a market-altering remedy, they agree that if it does so, it should do no more than restore market conditions to those that would have existed in the but-for world. Second, the Commission should adopt a remedy expeditiously and based on the existing record. Third, the remedy should address only post-1996 patents with respect to JEDEC-compliant products. *See* Complaint Counsel's Brief (CCB) 1, 23-24.

Three conclusions follow about the proper remedy. First, if the Commission adopts a market-altering remedy, it should allow Rambus to charge RAND royalties for the use of its inventions in the particular markets that the Commission found it to have monopolized. Second, such royalties would be in excess of 2.5% for DDR SDRAM. Third, there is no basis to restrict Rambus's royalties for the use of its inventions in DDR2 SDRAM devices or in other markets that the Commission did not find Rambus to have monopolized.

Complaint Counsel argue, however, that the Commission should effectively cancel Rambus's patents, by (for example) requiring Rambus to offer a royalty-free license covering all inventions disclosed by its pre-1996 patents for use in JEDEC-compliant devices. Complaint Counsel's submission reflects errors on five fundamental issues, each of which is discussed in turn below: 1) the propriety of a drastic, market-altering remedy that would essentially forfeit Rambus's patent rights; 2) proper allocation of the burden to prove causation in the remedy phase; 3) market conditions in the but-for world;

4) the Commission's authority to alter markets in which it did not find unlawful conduct; and 5) the royalty that Rambus would have charged in the but-for world.

I. THE COMMISSION SHOULD REJECT COMPLAINT COUNSEL'S PROPOSAL FOR A ZERO-ROYALTY REMEDY

A. The Commission May Not Restrict Market Power As A Remedy

Section 5 of the FTC Act gives the Commission authority to issue forward-looking cease-and-desist orders that prevent conduct deemed to be unlawful and ensure against its repetition. *See* Rambus Brief (RB) 5-6. Complaint Counsel contend that Section 5 also authorizes the Commission to alter markets in order to diminish a monopolist's market power. *See* Complaint Counsel's Brief (CCB) 3. But Complaint Counsel rely on cases involving the Commission's authority under Section 7 of the Clayton Act to remedy anticompetitive mergers,[1] or the *district courts'* authority to remedy antitrust violations.[2] None suggests that Section 5 authorizes the Commission to diminish a respondent's market power.[3] The Supreme Court has distinguished the Commission's Section 5 authority from the district courts' broader equitable powers. *See Ford Motor Co. v. United States*, 405 U.S. 562, 573 n.8 (1972); *see also Reynolds Metals*

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1 *See, e.g., In re Ecko Prods. Co.*, 65 F.T.C. 1163 (1964), *aff'd sub nom. Ecko Prods. Co. v. FTC*, 347 F.2d 745 (7th Cir. 1965). The Clayton Act was amended in 1950 to broaden the FTC's remedial authority specifically with respect to mergers. *See United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 346-348 (1963).

2 *See, e.g., Hoffman-La Roche Ltd. v. Empagran S.A.*, 542 U.S. 155 (2004); *United States v. U.S. Gypsum Co.*, 340 U.S. 76 (1950).

3 Complaint Counsel suggest (CCB 3-4) that *FTC v. National Lead Co.*, 352 U.S. 419, 430 (1957), held that the Commission "must assure that a violator will 'relinquish the fruits of his violation.'" Complaint Counsel misread that case. The Court did not endorse broad market-altering power on the part of the Commission; it held only that the Commission may "take such reasonable action as is calculated to preclude the revival of the illegal practices." *Id.* The Court was clearly referring to the Commission's cease-and-desist authority to ensure against *repetition* of unlawful conduct.

Co. v. FTC, 309 F.2d 223, 230-231 (D.C. Cir. 1962). The Commission itself recognized limits on its Section 5 authority when it sought additional authority from Congress.[4] Congress opted instead to authorize the Commission to request additional remedies from the district courts. *See* 15 U.S.C. § 53(b) (as amended in 1973). Contrary to Complaint Counsel's contention, Section 5 does not empower the Commission to impose market-altering remedies.

B. Enjoining Enforcement Of Rambus's Patents Or Requiring Royalty-Free Licensing Would Be An Extraordinary and Unwarranted Remedy

Even if the Commission had authority to go beyond cease-and-desist orders, Complaint Counsel overreach by arguing that the Commission should enjoin enforcement of Rambus's patents altogether or require Rambus to issue royalty-free licenses. Complaint Counsel ignore *Hartford-Empire Co. v. United States*, 323 U.S. 386 (1945), where the Supreme Court disapproved an antitrust remedial decree that would have required the patentee to surrender its patent rights. *See id.* at 415 ("[I]t is difficult to say that, however much in the past such defendant has abused the rights thereby conferred, it

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[4] *See Federal Trade Comm'n Act: Hearing on H.R. 14931, et al. before the Subcomm. On Commerce and Fin. Of the House Comm. On Interstate and Foreign Commerce*, 91st Cong. 63-69 (1969) (FTC Commissioner Elman, stating that FTC can prohibit unfair practices "solely through issuance of orders to cease and desist having only a prospective effect" and that such orders "merely order the respondent to sin no more"); *id.* at 67 (discussing limited deterrence value of "'sin no more' cease-and-desist orders"); *see also Agriculture–Environmental and Consumer Protection Appropriations for 1974: Hearings before a Subcomm. of the House Comm. on Appropriations*, 93d Cong, 99 (1974) (agreeing that the "limit" of the Commission's authority in the adjudicative context is a cease-and-desist order); S. Rep. No. 93-151, at 10 (1973).

must now dedicate them to the public.").[5] The Court described such a remedy as "confiscation," *id.* at 414, and stressed that courts had generally avoided such "forfeiture provisions" in the past, *id.* at 416.[6] The Court also noted that Congress had repeatedly considered, but never adopted, proposals to cancel patents that had been used as an instrument to violate the antitrust laws (*id.* at 416)—essentially what Complaint Counsel request now. *See also United States v. National Lead Co.*, 332 U.S. 319, 349 (1947) (upholding compulsory licensing remedy but pointing out that reducing "all royalties automatically to a total of zero … appears, on its face, to be inequitable without special proof to support such a conclusion").[7]

Complaint Counsel rely almost exclusively on FTC consent orders in which Section 5 respondents agreed not to enforce certain patent rights.[8] The validity of those orders was not contested. The sole judicial decision that even arguably suggests that the

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5 *See also* Complaint Counsel's Motion to Dismiss Complaint, *In re VISX, Inc.*, Dkt. No. 9286, at 7 n.5 (filed December 1, 1999) (stating that Complaint Counsel could find no authority suggesting that Commission could enjoin enforcement of a valid patent; citing *Hartford-Empire*).

6 The Commission's cancellation of Rambus's intellectual property rights would raise constitutional concerns. *See Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1002-1003 (1984) (recognizing that intellectual property rights are protected by the Fifth Amendment).

7 Complaint Counsel argue that a zero-royalty license would be the easiest remedy to administer (CCB 15-16), but an improper remedy cannot be justified on grounds of ease of administration, and in any event, a fixed royalty cap (such as 2.5% for DDR SDRAM) would be just as easy to administer, given that Rambus is a pure-play technology company that does not engage in cross-licenses. Easiest of all to administer would be a remedy limited to preventing future violations.

8 *Agreement Containing Consent Order, Unocal Oil Co.*, Docket No. 9305 (2005); *In re Bristol-Meyers Squibb Co.*, 2003 F.T.C. LEXIS 59 (2003); *In re Dell Computer Corp.*, 121 F.T.C. 616 (1996); *In re Eli Lilly & Co.*, 95 F.T.C. 538 (1980); *In re Xerox Corp.*, 86 F.T.C. 364 (1975).

Commission has authority to restrict patent royalties does not support a zero royalty. In *American Cyanamid Co. v. FTC*, 363 F.2d 757 (6th Cir. 1966), even though respondent Pfizer had *obtained* its patent inequitably by misleading the Patent Office, the Commission rejected Complaint Counsel's request to prevent Pfizer from collecting royalties and, instead, ordered Pfizer to grant licenses at a reasonable royalty not exceeding 2.5%. *In re American Cyanamid Co.*, 63 F.T.C. 1747 (1963).

Complaint Counsel try to bolster their request with an analogy to equitable estoppel. CCB 12-13. But equitable estoppel is not an antitrust remedy; it is a *defense* that can be raised in private patent litigation by an infringer. Estoppel rests on the principle that courts should not assist plaintiffs in enforcing their rights unless they have clean hands. Estoppel is thus "a shield, not a sword." *Arnold & Associates, Inc. v. Misys Healthcare Sys.*, 275 F. Supp. 2d 1013, 1023 (D. Ariz. 2003); *see generally A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1041 (Fed. Cir. 1992). Moreover, estoppel cannot be applied on a wholesale basis; a court must consider the facts and circumstances of each individual case. Thus, to establish the defense in an infringement action, each DRAM manufacturer would have to prove that it was individually misled by Rambus's conduct and relied to its individual detriment on a misrepresentation. *See id.* at 1041, 1046.

II. COMPLAINT COUNSEL BEAR THE BURDEN OF PROVING THE NATURE OF THE BUT-FOR WORLD

Even if the Commission has the authority to issue a remedy that attempts to restore the markets to their but-for condition, Complaint Counsel have not made the showing necessary to justify such a remedy. The Commission's finding of liability does not establish that a market-altering remedy is warranted. Where, as here, the theory of liability is that a patentee used its intellectual property rights to exclude nascent competition—and, consequently, it is uncertain what competition would have existed in the absence of such conduct—the "[m]ere existence of an exclusionary act does not itself justify full feasible relief against the monopolist to create maximum competition." *United States v. Microsoft Corp.*, 253 F.3d 34, 106 (D.C. Cir. 2001) (en banc) (quoting 3 Areeda & Hovenkamp, *Antitrust Law* ¶ 650a at 67 (2d ed. 2002); *see New York v. Microsoft Corp.*, 224 F. Supp. 2d 76, 102 (D.D.C. 2002).[9] *See also* Comm'n Op. 24-25 (recognizing difference between liability- and remedy-stage proof burdens).

To justify a remedy that would reduce Rambus's market power, Complaint Counsel had the burden of establishing that, in the but-for world, JEDEC *would have* rejected Rambus technologies or Rambus *would have* charged lower royalties. *See* II Herbert Hovenkamp et al., *IP and Antitrust* § 35.5 at 35-43 to 35-44 (2006 Supp.) (plaintiff must establish that SSO "would not have adopted the standard in question but for the misrepresentation or omission" because a failure to disclose "will not affect the competitive marketplace if the [SSO] would have approved the standard even if it had

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[9] Although *Microsoft* concerned the propriety of divestiture as a remedy, requiring surrender of intellectual property rights is "reasonably analogized" to such a remedy. *See Massachusetts v. Microsoft Corp.*, 373 F.3d 1199, 1230 (D.C. Cir. 2004) (en banc).

known about the patent"). The Commission did not find that either proposition was true. It concluded only that Rambus's conduct "reasonably appear[ed] capable of making a sufficient contribution to creating or maintaining monopoly power," Comm'n Op. 28, 81—in other words, that such conduct created a sufficient *risk* of harm to competition. The Commission found that "[a]lternative technologies were available" and "*could have* been substituted" for Rambus's technologies. *Id.* at 76. (emphasis added). The Commission did not find that JEDEC *would* have chosen other technologies in the but-for world, but rather that *Rambus* had not proven that JEDEC would inevitably have chosen Rambus's technologies. *See id.* at 82.

To close this logical gap, Complaint Counsel ask the Commission to "resolve any reasonable doubts against Rambus." CCB 9. None of the authorities cited by Complaint Counsel suggests, however, that an antitrust plaintiff can merely propose the conditions in the but-for world and leave it to the defendant to disprove them. Rather, those cases hold that, where particular harm to competition has been proven, doubts about whether the remedy sought was necessary in order to restore competition would be resolved against the defendant. For example, in *United States v. E.I. du Pont de Nemours and Co.*, 366 U.S. 316, 331-332 (1961), the only "doubt" the Court resolved in favor of the government was whether Dupont's proposed remedy would cure the proven anticompetitive effects of its violation—not doubts as to what, if any, anticompetitive effects there were. And *New York v. Microsoft Corp.*, 224 F. Supp. 2d 76 (D.D.C. 2001), suggested only that doubts may be resolved against a defendant when examining the necessary breadth of a "fencing-in" injunction crafted "for purposes of enjoining the [unlawful] conduct itself," *id.* at 148 (citing 3 Areeda ¶ 653c at 91)—*not* when trying to determine the nature of the but-for world as a predicate to setting a market-altering remedy. The other cases cited by Complaint Counsel (CCB 9) concern doubts about the proper measure of damages, not doubts about whether or how competition was injured.[10]

Complaint Counsel also misread the Areeda treatise. The section they cite suggests that defendants should bear the risk of uncertainty in determining whether injunctive relief will effectively prevent a repetition of unlawful conduct. 3 Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶ 653f at 103-104 (2d ed. 2002). The treatise takes a very different position with respect to relief intended to dissipate market power. *Id.* ¶ 650a(2)(A) at 67, ¶ 653b at 78 (such relief "require[s] a clearer indication of causal connection between the conduct and creation or maintenance of the market power").

III. JEDEC WOULD HAVE SELECTED RAMBUS'S TECHNOLOGIES IN THE BUT-FOR WORLD, AND ITS MEMBERS WOULD HAVE AGREED TO PAY A REASONABLE ROYALTY TO RAMBUS

The zero-royalty remedy Complaint Counsel seek rests on the incorrect assumption that JEDEC would have chosen different technologies in the but-for world.[11] JEDEC

[10] Complaint Counsel suggest that their allegations of document spoliation should affect the remedy. CCB 10-11. The Commission, however, has already declined to resolve any issues arising out of the alleged spoliation and stated that "[n]o remedy for the spoliation issue is necessary." Comm'n Op. 118.

[11] Even on Complaint Counsel's assumption, Rambus should be able to charge whatever *ex ante* rate DRAM manufacturers would have agreed to pay *before* JEDEC's adoption of a new DRAM standard. The record contains an excellent benchmark for that *ex ante* rate: the "other DRAM" clause of the Hyundai-Rambus agreement discussed in Rambus's Opening Brief (17-18). The 2.5% rate covering Rambus DRAM technology other than RDRAM (i.e., SyncLink, SDRAM, and DDR SDRAM) was negotiated in 1995, before JEDEC had chosen a DRAM standard, and was for the duration of Rambus's patents (regardless of whatever standard eventually was adopted). CX 1600. It thus constitutes an *ex ante* rate independent of any standardization effect and demonstrates that the value of Rambus's patents did not depend entirely on JEDEC standardization.

chose Rambus's technologies, not casually or ignorant of the alternatives, but after "serious, searching consideration" of the alternatives and "prolonged debate." Comm'n Op. 76. Under well-accepted economic principles, JEDEC's revealed preference demonstrates that JEDEC preferred Rambus's technologies over the alternatives, royalties to Rambus aside. ALJ Op. ¶¶1486-1489. Indeed, JEDEC adopted the same Rambus technologies for DDR2 SDRAM in 2003 (and, it appears, is doing so for DDR3 SDRAM (*see* CCB 18)), several years after it became aware of Rambus's patents covering those technologies and despite the lack of "lock-in." Comm'n Op. 114. JEDEC's considered and unconstrained choice of Rambus's patented technologies demonstrates that JEDEC preferred those technologies over alternatives *even when faced with the prospect of paying Rambus's prevailing royalties* (3.5% on DDR SDRAM). ALJ Op. ¶¶1486-1518. JEDEC would not have chosen the Rambus technologies unless its members believed that Rambus's technologies were superior in cost-performance terms. Rapp, Tr. 9803-9805. And it is "the subjective perceptions of JEDEC members at the time" that matters. Comm'n Op. 77.

JEDEC would also have preferred Rambus's technologies in the but-for world in which Rambus disclosed its patent interests. Disclosure of patent interests would not have changed any of the factors that led JEDEC to prefer Rambus's technologies in the real world, at least once JEDEC was assured that the royalties would not be excessive. And the evidence demonstrates that JEDEC *never* rejected an otherwise preferred technology because of a credible patent disclosure by a JEDEC member.[12] To the contrary, in that situation, JEDEC consistently asked for a RAND assurance and, if given, adopted the technology. *See* ALJ Op. ¶¶1464-1485; RPFF 1220-1238.

At most, JEDEC would have requested a RAND assurance from Rambus, and Rambus would have obliged. In Complaint Counsel's version of the but-for world, where commercially feasible alternatives to Rambus's technologies exist, Rambus would have had to choose between (a) giving a RAND assurance, having its technology adopted by JEDEC, and obtaining royalties from JEDEC-compliant devices or (b) refusing a RAND assurance, having JEDEC adopt an alternate technology, and thus foresaking royalties it might otherwise have received. Because Rambus's business model depends on royalties, it would have had every economic incentive to provide a RAND assurance in the but-for world. ALJ Op. ¶1444; Teece, Tr. 10341-10351.[13]

Complaint Counsel suggest that JEDEC would have rejected Rambus's superior technologies because its members would have preferred not to pay royalties. CCB 5.

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12 Complaint Counsel refer to the 1997 NEC clocking proposal, in which Rambus was thought potentially to hold a patent interest and which JEDEC rejected without seeking a RAND commitment from Rambus. CCB 3, 5-6. But Rambus was not a member of JEDEC at that time. Further, there is no record evidence suggesting that JEDEC preferred the NEC proposal to the alternatives, even apart from the potential patent interest. Notably, the NEC proposal was just a first showing, not a balloted proposal submitted for final adoption after "serious, searching consideration." Comm'n Op. 76; JX-36 at 7.

13 Amici argue that Rambus declined to give RAND commitments in the real world. Amicus Brief of Broadcom Corp. and Freescale Semiconductor, Inc. 9. But the episodes they cite are very different from what would have happened in the but-for world. Amici cite no evidence that JEDEC ever asked Rambus to give a RAND assurance. Rambus never faced in the real world the choice it would have faced in the but-for world: provide a RAND assurance or lose the prospect of revenues from JEDEC-compliant devices.

There is no evidence that JEDEC would have actually spurned Rambus's superior technologies merely because they were patented.[14] Moreover, a JEDEC policy or decision to reject superior technologies simply because they are patented would constitute an illegal boycott in violation of the Sherman Act and § 5 of the FTC Act. *See American Soc'y of Sanitary Eng'g*, 106 F.T.C. 324 (1985) (prohibiting a standard-setting organization from excluding equally-performing technologies solely on ground that they were patented); *see also National Macaroni Mfrs. Ass'n v. FTC,* 345 F.2d 421, 426 (7th Cir. 1965). The Commission should not issue a remedy premised on Complaint Counsel's assumption of an illegal boycott of Rambus in the but-for world.

IV. THERE IS NO BASIS FOR A REMEDY THAT AFFECTS THE MARKET FOR TECHNOLOGY USED IN DDR2 SDRAM OR OTHER MARKETS IN WHICH THERE HAS BEEN NO FINDING OF MONOPOLIZATION

Complaint Counsel seek a remedy that "include[s] products that conform to JEDEC's DDR2 SDRAM standard and follow-on standards." CCB 16. They assert that "DDR SDRAM served as the base for the DDR2 SDRAM standard." CCB 17. But the Commission found that the record "does not establish a causal link between Rambus's exclusionary conduct and JEDEC's adoption of DDR2 SDRAM." Comm'n Op. 114. While the Commission suggested that there may have been some costs involved in switching away from Rambus's technologies when the DDR2 SDRAM standards were adopted, it found the record too "imprecise and mixed" to establish a causal connection

[14] Complaint Counsel argue that Rambus's technologies were not superior, and that JEDEC would not have requested a RAND assurance, because "equally attractive alternatives cost no more than the [Rambus] technologies in question." CCB 7. This argument, based on hindsight evidence about the relative performance of various technologies, is refuted in Rambus's Opening Brief (23-25) and in the attached Appendix.

between Rambus's allegedly unlawful conduct and the DDR2 standard. *Id.* at 113-114. There is thus no basis for restricting Rambus's competitive position in the markets for technologies incorporated into DDR2 and follow-on standards.

Complaint Counsel argue that the Commission is not limited to prohibiting an illegal practice "in the precise form in which it is found to have existed in the past." *FTC v. Ruberoid Co.*, 343 U.S. 470, 473 (1952). This principle gives the Commission discretion to fashion remedies sufficient to ensure that the defendant will not engage in similar anticompetitive conduct in the future. *See, e.g., FTC v. National Lead Co.*, 352 U.S. 419, 429-430 (1957). Applied here, it would allow the Commission to issue orders broad enough to prevent Rambus from misleading any SSO from unknowingly adopting its proprietary technology. *See* RB 5. But this principle does *not* allow the Commission to dissipate Rambus's power in markets that are unaffected by any anticompetitive practice and that are thus *already* in their but-for state. *Cf. ITT Continental Baking Co., Inc. v. FTC*, 532 F.2d 207, 221 (2d Cir. 1976) (striking down FTC order that was not "reasonably calculated to prevent future violations of the sort found to have been committed").[15] Restricting Rambus's patent rights in such markets would create a windfall for DRAM manufacturers and punish Rambus by depriving it of the fruits of legitimate competitive success. *See Ruberoid*, 343 U.S. at 473.

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[15] The other cases cited by Complaint Counsel are inapposite for the same reason. *See* cases cited at CCB 16-18.

V. THE BEST AVAILABLE EVIDENCE SUGGESTS A MINIMUM RATE OF 2.5% FOR DDR SDRAM

The "other DRAM" clause in the 1995 Hyundai-Rambus license, discussed in Rambus's Opening Brief (17-18), provides the best record evidence of the royalty rate—at least 2.5%—that Rambus would have charged after an *ex ante* negotiation with JEDEC members. Complaint Counsel themselves relied on the "other DRAM" clause as evidence for what would have happened in the but-for world. *See* CC Response to RPFF 1206. Now, however, Complaint Counsel rely on licenses that shed no light on royalty rates for DDR SDRAM and SDRAM in the but-for world.

A. The Samsung License Amendment And the Infineon Settlement Are Completely Inapt

Despite agreeing that the Commission should decide the remedy based on the existing record, Complaint Counsel argue (CCB 19-20) that two license agreements **outside the record in this case** support a royalty cap of 0.25% on JEDEC-compliant DRAMs. The Commission should reject this attempt to inject non-record material. *See, e.g., In re Chester H. Roth Co., Inc.*, 55 F.T.C. 1076 (1959). In any event, those agreements, executed in 2001 and 2005, have nothing to do with the but-for world.

Judge Payne's then-recent adverse judgment against Rambus in the *Infineon* case (based on events that would not have happened in the but-for world) provided the impetus for the 2001 Amendment to the 2000 Samsung-Rambus Agreement; not surprisingly, the amendment favored Samsung.[16] Even so, the 2001 Amendment was

[16] That judgment was later reversed on appeal. *See Rambus Inc. v. Infineon Technologies*, 318 F.3d 1081 (Fed. Cir. 2003). After further proceedings on remand, Rambus and Infineon settled the litigation in 2005.

intended as a temporary adjustment, and Samsung agreed to pay the original royalty rates (found in numerous other agreements at that time) once Rambus entered into a license with either Micron or Infineon (which it did in 2005). CCB Attachment 2, ¶ 7. Thus, Samsung agreed to and reaffirmed the 0.75% (SDRAM) and 3.5% (DDR SDRAM) rates as appropriate. Samsung also continued to pay Rambus the original controller rates of 1.5% (SDR Controllers) and 5.5% (DDR Controllers) until the Agreement terminated in 2005. CCB Attachment 1; Attachment 2, ¶1.

The Infineon settlement is similarly unrepresentative of the but-for world. In March 2005, after more than four years of litigation, Rambus reached a settlement with Infineon. CCB Attachment 5. That complex settlement, dealing with multiple claims and future licensing provisions, is of little relevance to the remedy issues here. Indeed, the district court overseeing Rambus's patent litigation against Hynix excluded evidence about the Infineon settlement, finding that "it has virtually no probative value" for determining a reasonable royalty rate. *Hynix Semiconductor Inc. v. Rambus Inc.*, No. C-00-20905, Order Granting Rambus's Motion *In Limine* Regarding Weinstein's Supplemental Report at 2 (N.D. Cal. Mar. 9, 2006) (Attachment 1).[17]

[17] *See also Hynix Semiconductor Inc. v. Rambus Inc.*, No. C-00-20905, Order on Patent Trial Motions *In Limine* at 19 (N.D. Cal. Mar. 1, 2006) (Attachment 2) ("Because the Infineon license came after Judge Payne dismissed Rambus's patent claims on the basis of unclean hands, it stands in stark contrast to the situation here, where Rambus has survived Hynix's unclean hands challenge. This severely diminishes the relevance of the Infineon license.").

B. RDRAM Rates Are Not Proper Benchmarks

Complaint Counsel make three specious arguments in an effort to show that RDRAM rates should be higher than rates for SDRAM and DDR SDRAM: (a) that RDRAM is a niche product rather than a commodity; (b) that RDRAM licenses were full technology agreements; and (c) that RDRAM licenses included more technologies. CCB 21. These arguments are easily rebutted: (a) prices for niche products are not always higher; (b) RDRAM licenses provided substantial, non-royalty benefits for Rambus;[18] and (c) royalties for blocking patents do not depend on the number of patents.[19] More important, what these purported distinctions—along with the differences discussed in Rambus's Opening Brief (21-22)—really show is that RDRAM is too different from SDRAM and DDR SDRAM to serve as a useful benchmark for royalty rates in the but-for world, especially where there are substantial real-world equivalents.

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18 *See* RB 22.

19 *See U.S. Philips Corp. v ITC*, 424 F.3d 1179, 1190-1192 (Fed. Cir. 2005), *cert. denied*, 126 S. Ct. 2899 (2006).

CONCLUSION

The Commission should reject Complaint Counsel's proposal for a zero royalty. The Commission should also reject Complaint Counsel's proposal for a remedy covering DDR2 SDRAM and other markets in which no violation has been established. As explained in Rambus's Opening Brief, if the Commission intends to adopt a market-altering remedy, it should either order Rambus to license the relevant technologies in the relevant markets on RAND terms, or it should set a maximum royalty rate in excess of 2.5% for use of the relevant technologies in DDR SDRAM products.

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Respectfully submitted,

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Exhibit

A

APPENDIX

Complaint Counsel argue that various "equally attractive alternatives cost no more" than the Rambus technologies at issue. CCB 7-8. The table below summarizes some, though certainly not all, of the evidence rebutting Complaint Counsel's arguments regarding the purported alternatives. Complaint Counsel list yet an additional six purported alternatives in a footnote. CCB 9 n.7. These likewise were not viable, cost-free alternatives for reasons set forth in the Initial Decision. ALJ Op. 1201-14, 1231-47, 1281-91.

Alternative	Complaint Counsel's Argument	Contrary Evidence
Fixed CAS Latency	At most two latencies required. Yield would improve quickly. No additional inventory cost.	Two CAS latencies would not provide the flexibility of the JEDEC standard. RB 24-25. Cost issues would not be solved by improved yield because Rambus's expert's calculations assumed that yield was already optimized. Geilhufe, Tr. 9562. Complaint Counsel's expert did not dispute that there would be additional inventory cost, and testified only that he was "not certain." Jacob, Tr. 5592-5593. This alternative was expressly rejected by JEDEC for DDR2 for performance reasons despite knowledge of Rambus's infringement claims. RX-1626 at 3-4.
Setting CAS Latency with a Fuse	OEMs could blow electrical fuses themselves.	Even if electric fuses for setting CAS latency were viable, OEMs could not blow the fuses because they cannot perform necessary testing afterward. ALJ Op. ¶1171; Jacob, Tr. 5597-5598.
Use of a Separate Pin to Set CAS Latency	Many configurations of SDRAMs had extra pins that could be used for this purpose.	IBM's Gordon Kelley, the chair of the relevant JEDEC committee, testified that such pins were reserved for address pins in higher density future generations. Kelley, Tr. 2552-2553.
Fixed Burst Length	Only one or two burst lengths required.	The JEDEC SDRAM standard and available products allow for five different burst lengths. ALJ Op. ¶1219, ¶1221. This alternative was expressly rejected by

		JEDEC for DDR2 for performance reasons despite knowledge of Rambus's infringement claims. ALJ Op. ¶¶1510-1511.
Burst Terminate Command to Set Burst Length	Viable alternative.	This feature was included in SDRAM (as an option), making it unnecessary to include Rambus technology if it were a viable alternative. ALJ Op. ¶1249.
Doubling the Clock Speed	On-DIMM clock not required.	An expensive on-DIMM clock would have been required to deal with clock distribution problems—problems acknowledged by JEDEC members themselves. *See* Geilhufe, Tr. 9609-10; Kellogg, Tr. 5182; Lee, Tr. 11089 (TI's proposal to use a single frequency clock, with double the frequency, was not practical and lacked sufficient support at JEDEC). This alternative was expressly rejected by JEDEC for DDR2 for performance reasons despite knowledge of Rambus's infringement claims. CX-426 at 4.
DLL on the Controller	Viable alternative.	Not a viable alternative because it does not address the problem that on-chip DLLs solve, namely, timing differences between individual DRAMs. ALJ Op. ¶¶1351-1352, 1359.
Vernier	Viable alternative.	The Synclink consortium tried and failed to design a high-speed DRAM with a vernier instead of an on-chip DLL. ALJ Op. ¶¶1374-1375. While there were "competing explanations" for the exact purpose that the DLL ultimately served in Synclink's SLDRAM, Comm'n Op. at 93, there is no dispute as to the only material fact, namely, that Synclink had to include a DLL on the SLDRAM for timing purposes and could not make do with a vernier alone. *See* Jacob, Tr. 5620-21; RX-2099-11 at 5. It is not established that this (or other alternatives) were patent free. *See e.g.* ALJ Op. ¶1376.
DQS Strobe	Viable alternative.	This feature was already in JEDEC DDR standard parts, making it unnecessary to include Rambus technology if it were a viable alternative. Comm'n Op. 94 ("DQS strobes are part of the DDR SDRAM standard").

Attachment

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Attachment 1