<u>In the Matter of Rambus, Inc.</u>
Docket No. 9302

Remedy Statement of Commissioner Pamela Jones Harbour Concurring in Part and Dissenting in Part[1]

I join Parts I, II

[1] This opinion uses the same abbreviations used in the majority's opinion on remedy [hereinafter Majority Remedy Opinion].

[2] *See* Eastman Kodak Co. v. Image Tech. Servs., Inc., 504 U.S. 451, 466-67 (1992) ("Legal presumptions that rest on formalistic distinctions rather than actual market realities are generally disfavored in antitrust law.").

[3] Majority Remedy Opinion at II.A.-B.; Dissenting Statement of Commissioner J. Thomas Rosch [hereinafter Rosch Remedy Dissent].

Rambus would have us believe that – if faced with a choice between collecting RAND royalties or no royalties at all – Rambus would have offered JEDEC a RAND commitment, in order to entice JEDEC to adopt Rambus technologies as part of the SDRAM standards.[4] Based on the record before us, I cannot agree.

As noted by Commissioner Rosch in his dissenting statement,[5] RDRAM was Rambus's flagship technology. In its unanimous liability opinion, the Commission found that Rambus's goal was the adoption of its proprietary RDRAM technology as the *de facto* industry standard.[6] The Commission also found that a primary objective of the JEDEC standard-setting process was to establish a royalty-free alternative to RDRAM. The industry resisted RDRAM precisely because of the high royalties Rambus was expected to charge,[7] in keeping with the company's business model of earning its revenue through patent licensing.[8]

If Rambus had decided to offer a RAND commitment to JEDEC, presumably Rambus would have offered something less than the full package of technology comprising RDRAM, because Rambus would have wanted to continue to push for industry adoption of RDRAM. Rambus also would have known that its RAND rates for this package of technology must be proportional to the anticipated cost of alternative technologies under consideration by JEDEC, or else the RAND commitment would not be an attractive proposition to manufacturers of DRAM components. The RAND rates for this technology package, however, would have represented a significant discount off of the RDRAM rates Rambus was expected to charge. As a result, manufacturers would have been able to forgo the pricier RDRAM standard, yet still license some portion of Rambus's DRAM technology – at the discounted RAND rates – for incorporation into rival JEDEC-compliant devices. But this outcome would have been fundamentally inconsistent with the Rambus business model, because it would have reduced even further the industry's incentives to adopt RDRAM as a *de facto* standard. Therefore, it is difficult to conclude on this record that Rambus would have offered RAND terms in a plausible "but for"world.

Even if we were to suppose, nevertheless, that Rambus would have offered a RAND commitment, the inquiry cannot end there. We must ask, as well, how the JEDEC members would have responded. Again, based on the record before us, it is implausible to conclude that the JEDEC

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4 RBR at 3, 10-12 & n.9; RRBR at 10-11.

5 Rosch Remedy Dissent at 8.

6 Rambus Liability Opinion at 8.

7 *See, e.g.*, CX 961 at 1 (quoting a September 1997 Intel e-mail to Rambus Chief Executive Officer, expressing concern that "absolute cost is the critical factor" at least for the low end of the market and warning that, upon analyzing the royalty obligations attached to RDRAM, the industry would develop alternatives).

8 *See* Rambus Liability Opinion at 7 ("Rambus develops, secures patents on, and licenses technologies to companies that manufacture semiconductor memory devices. Rambus is not a manufacturing company; rather, Rambus earns its revenue through the licensing of its patents.") (citations omitted); CX 2106 (Farmwald FTC Dep.) at 220 (*in camera*) ("[r]oyalties are the lifeblood of Rambus"); *see also* Rosch Remedy Dissent, notes 29-30 and accompanying text.

[9] *See, e.g.*, Rambus Liability Opinion at 74 & n.403 ("Indeed, the one time that JEDEC members had advance knowledge that a Rambus patent was likely to cover a standard under consideration, the members took deliberate steps to avoid standardizing the Rambus technology."); Rosch Remedy Dissent at II.C.

[10] *See, e.g.*, Rambus Liability Opinion at 76 ("Alternative technologies were available when JEDEC chose the Rambus technologies, and could have been substituted for the Rambus technologies had Rambus disclosed its patent position."), 82 ("We find that the evidence does not establish that Rambus's technologies were superior to all alternatives on a cost/performance basis."), 97-98 ("No matter what the specific outcome might have been [if Rambus had disclosed its patent position], the consequences of incorporating Rambus's patented technologies into the standards would have been identified and weighed *before* the standards were adopted, *when Rambus's technologies were competing with the alternatives*. That 'but for world' would have been more competitive than the current DRAM marketplace, in which Rambus has monopoly power and can charge whatever royalties it chooses.") (emphasis in original).

[11] *See* Rambus Liability Opinion at 63-65 (various industry participants believed that the JEDEC standards under consideration would be Rambus-free and royalty-free). Their beliefs were consistent with Rambus's behavior, in light of the Commission's findings regarding Rambus's course of exclusionary conduct. The Commission found that Rambus's business strategy included amending its patent applications to cover JEDEC-compliant products, based on information gleaned during Rambus's participation in JEDEC while the standards were under development. *Id.* at 4 ("through its participation in JEDEC, Rambus gained information about the pending standard, and then amended its patent applications to ensure that subsequently-issued patents would cover the ultimate standard"), 40-48 (detailing the chronology of Rambus's conduct, including relevant amendments), 67 (holding that Rambus's amendment program was deceptive); *see also* CX 837 at 2 (internal email advising Rambus management that the company should "redouble [its] efforts to get the necessary amendments completed, the new claims added and make damn sure this ship is watertight before we get too far out to sea."). It is entirely possible that the JEDEC stand

When the Commission fashions a remedy, it should strive to restore, as completely as possible, the competitive environment that would have existed in the "but for" world.[12] In this case, the Commission can and should impose a remedy that would apply to technologies included in all JEDEC standards that were developed, *or in development*, at the time Rambus began enforcing its patents. This test would yield a remedy covering DDR2 (but not DDR3 or successive generations).

This formulation would reflect an appropriate use of fencing-in relief – consistent not only with existing jurisprudence regarding the scope of the Commission's remedial authority, but also with burden-of-proof requirements during the remedy phase. A DDR2 remedy would more completely and effectively mitigate the likely and foreseeable effects of Rambus's exclusionary conduct and would create an opportunity for the market to establish a competitive equilibrium.

The proposed test also recognizes the need for a clearly articulated limiting principle. The remedy would be purely prospective and reasonably bounded in breadth, yet aggressive enough to prevent Rambus from being unjustly enriched by the lingering effects of its unlawful conduct.

Finally, such a remedy would enhance the deterrent effect of the Commission's enforcement action by sending a forceful message: companies will not be allowed to profit from monopoly power obtained by hijacking a standard-setting organization.

A. <u>The Commission's Liability Opinion Does Not Rule Out The Possibility of DDR2 Lock-In</u>

In its unanimous liability opinion, the Commission held that "[t]he record does not support a finding that lock-in conferred durable monopoly power over DDR2 SDRAM by 2000" – subject to the caveat expressed in footnote 621: "Although we do not, on this record, find durable monopoly power as to DDR2 SDRAM, neither do we rule it out. It is possible that Rambus did, in fact, obtain durable monopoly power over DDR2 SDRAM."[13]

As footnote 621 recognized, the Commission "might have found lock-in with respect to DDR2 SDRAM if the record had demonstrated, for example, that backward compatibility concerns were a substantial determinative factor in JEDEC's DDR2 SDRAM standard-setting decisions."[14] For purposes of establishing liability, however, the record was deemed insufficient to make such a finding.

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12 *See* Majority Remedy Opinion at 6 ("[T]he Commission's authority extends to restoring, to the extent possible, the competitive conditions that would have been present absent Rambus's unlawful conduct.").

13 Rambus Liability Opinion at 110, 114 & n.621.

14 *Id*. at 114 n.621.

The Court later gave a name to this concept: "those caught violating the [FTC] Act must expect some fencing in."[22] The Commission – with the approval of the courts – has included a variety of fencing-in provisions in its remedial orders.[23] The Commission may use its fencing-in authority as long as the relief is reasonably related to the illegal conduct and is not punitive.[24]

In this case, extending the relief to the DDR2 SDRAM standard would be reasonably related to Rambus's deceptive and exclusionary conduct. The Commission's unanimous liability opinion found that Rambus's course of deceptive conduct was causally linked to Rambus's acquisition of a monopoly position in technologies used in products compliant with JEDEC's SDRAM and DDR SDRAM standards. By the time Rambus began enforcing its patents against JEDEC-compliant products, the industry already had begun to develop the third-generation SDRAM standard – *i.e.*, DDR2. DDR2 was based on the existing SDRAM and DDR SDRAM standards, reflecting JEDEC's preference for "evolutionary" progression from one generation to the next. Given the industry's desire for backward compatibility,[25] Rambus reasonably could have anticipated – and would have hoped – that its technologies also would be incorporated into DDR2.

In the "but for" world, the SDRAM and DDR SDRAM standards would have been Rambus-free. Due to the path-dependent nature of JEDEC standard-setting, the inclusion of Rambus technologies in the first- and second-generation standards made it all but inevitable that Rambus technologies also would be included in DDR2. Rambus's

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[22] *Nat'l Lead*, 352 U.S. at 431.

[23] *See, e.g.*, Litton Industries, Inc. v. FTC, 676 F.2d 364, 370 (9th Cir. 1982) (quoting ITT Continental Baking Co. v. FTC, 532 F.2d 207, 223 (2d Cir. 1976)) (multi-product order to address "all products in a broad category, based on violations involving only a single product or group of products," to prevent respondent from transferring unlawful conduct to other products); Toys "R" Us, Inc., 126 F.T.C. 415, 615 (1998), *aff'd*, 221 F.3d 928, 939-940 (7th Cir. 2000) (respondent enjoined from making certain otherwise lawful requests for information from suppliers, because the requests were "the means used by TRU to implement and police the illegal restraints of trade").

[24] *See* Majority Remedy Opinion at 7 (a compulsory licensing order that attempts to replicate the "but for" world is not punitive).

[25] *See* Rambus Liability Opinion at 112 & n.613-14 ("Several industry witnesses expressed concerns that changing DDR2 SDRAM to avoid Rambus's patents would have disrupted backward compatibility. One witness testified that an effort to maintain backward compatibility after eliminating dual-edge clocking would have had 'a big impact' from the perspective of design and that a desire to maintain backward compatibility was the reason that a sub-unit of JEDEC's task group . . . chose to maintain dual-edge clocking.").

[26] The courts have upheld fencing-in provisions that prohibit otherwise lawful conduct, finding that they are not punitive. *See, e.g.*, L.G. Balfour Co. v. FTC, 442 F.2d 1 (7th Cir. 1971) (affirming divestiture order in §5 case, by implication finding remedy not punitive); Golden Grain Macaroni Co. v. FTC, 472 F. 2d 882 (9th Cir. 1972), *cert. denied*, 412 U.S. 918 (1973) (same); *see also* Curtis Publ'g Co. 78 F.T.C. 1472 (1971) (Commission

the remedy to technologies included in all JEDEC standards developed or in development at the time Rambus began enforcing its patents against JEDEC-compliant products, the Commission would do no more than restore the competitive *status quo ante*. Rambus would not be deprived of the entire value of its intellectual property, because Rambus still would have total freedom to enforce its patents with respect to all non-JEDEC-compliant uses (such as RDRAM). True, a royalty-free remedy would “hurt” Rambus more than the remedy endorsed by the majority. But one must be careful not to equate financial pain with excessive punishment. If a remedy is proportional to the underlying offense, it is not punitive, regardless of whether it inflicts pain. In contrast, if a remedy is not proportional to the offense, the Commission’s remedial goals are unlikely to be fully achieved. The wrongdoer will benefit; the remedy will not restore the *status quo ante*; and future violations may be encouraged rather than deterred.

C. <u>The Burden Of Proof Must Be Properly Allocated</u>

The Commission’s unanimous liability opinion found insufficient proof of a causal linkage between Rambus’s exclusionary conduct and its DDR2 monopoly. But the burden of proof in the remedial phase is less stringent than in the liability phase, and the evidence must be weighed accordingly. Finding a “reasonable relation” to the unlawful practices requires less evidenceT144.0000 524.400

required restitution of monopoly profits, describing remedy as prospective only and not punitive).

[27] United States v. E.I. DuPont de Nemours & Co.,

[31] *Cf.* United States v. Microsoft Corp., 253 F.3d 34, 48-49 (D.C. Cir.), *cert. denied*, 534 U.S. 952 (2001):

> [It] is somewhat problematic . . . that just over six years have passed since Microsoft engaged in the first conduct plaintiffs allege to be anticompetitive. As the record in this case indicates, six years seems like an eternity in the computer industry. By the time a court can assess liability, firms, products, and the marketplace are likely to have changed dramatically. This, in turn, threatens enormous practical difficulties for courts considering the appropriate measure of relief in equitable enforcement actions, both in crafting injunctive remedies in the first instance and reviewing those remedies in the second. . . . [But we] do not mean to say that enforcement actions will no longer play an important role in curbing infringements of the antitrust laws in technologically dynamic markets, nor do we assume this in assessing the merits of this case. Even in those cases where forward-looking remedies appear limited, the Government will continue to have an interest in defining the contours of the antitrust laws so that law-abiding firms will have a clear sense of what is permissible and what is not.

[32] As of January 2007, the lowest-priced "home and home office" desktop computers from Dell, Hewlett Packard, Gateway, and Apple all featured DDR2 SDRAM, according to their retail websites.

[33] Semico Research Corp., *Computing Applications Dominate DRAM Volume: The Growth of White Box*, Appx. Table 6 (June 2004, Report No. VM-102-04). According to this report, DDR2 DRAM has been projected to account for nearly $25 billion out of a toifaliofl$3al .3000 1wEgn6e0mde5d19i.c6a8n0s0e0.0000 TDr

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wherever possible. Complaint Counsel correctly assert[35] that a DDR2 remedy would help to "creat[e] a breathing spell during which independent pricing might be established without the hang-over of the long existing pattern of [anticompetitive conduct]."[36] By extending the remedy to DDR2, the Commission would give the market an opportunity to consider alternative technologies for DDR3 and subsequent standards.

E. Unjust Enrichment and Deterrence: Rambus Should Not Be Allowed to Profit From Its Unlawful Conduct

A remedy that fails to reach DDR2 will leave Rambus free to extract royalties on sales of a vast majority of JEDEC-compliant components currently, and soon to be, in the SDRAM marketplace. If Rambus is allowed to keep all of its DDR2 royalties on a going-forward basis, Rambus's exclusionary conduct will continue to be rewarded, as it already has been. This constitutes unjust enrichment, which is unfair to consumers.

It also may hamper effective deterrence, which should be one of the primary objectives of any remedy. As Areeda and Hovencamp state, "the goal of antitrust remedies is general deterrence, not simply destruction of a single monopoly for whatever social good that in itself might impose."[37] The Commission has sent a strong message in its liability opinion, and most participants in standard-setting organizations will take this message to heart. But the bottom-line result of the Commission's remedy is this: Rambus will continue to reap financial benefits that are reasonably related to its successful subversion of JEDEC's standards.

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quoted in Ekco Products Co., 1964 FTC LEXIS 115, 125 (1964).

[35] CCBR at 18.

[36] Assoc. of Conference Interpreters, 123 F.T.C. 465, 659-60 (1997) (quoting FTC v. Nat'l Lead, 352 U.S. 419, 425 (1957).

[37] III AREEDA & HOVENCAMP, *supra* note 28, at ¶ 710b4(C).