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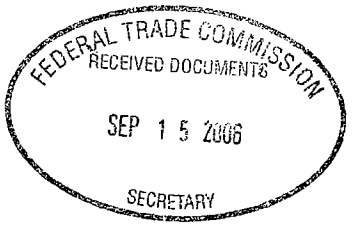
BEFORE THE FEDERAL TRADE COMMISSION



In the matter of	)	
	)	
RAMBUS INC.,	)	Docket No. 9302
	)	
a corporation.	)	
	)	

BRIEF OF AMICI CURIAE NVIDIA CORPORATION, MICRON TECHNOLOGY, INC., SAMSUNG ELECTRONICS CORPORATION, LTD., AND HYNIX SEMICONDUCTOR, INC. ON THE ISSUE OF THE APPROPRIATE REMEDY FOR RAMBUS'S VIOLATIONS OF THE FTC ACT

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IDENTITY AND INTEREST OF AMICI CURIAE

Amici Curiae NVIDIA Corporation, Micron Technology, Inc., Samsung Electronics Corporation, Ltd., and Hynix Semiconductor, Inc. (collectively "Amici") are global technology leaders. One Amicus, NVIDIA, manufactures and sells products (graphics processing units) that are designed to use, or interface with, JEDEC-compliant dynamic random access memory ("DRAM"), including single data rate synchronous DRAMs ("SDRAMs") and double data rate synchronous DRAMs ("DDR SDRAMs"). Other Amici design, manufacture, and sell JEDEC-compliant DRAMs. Amici contribute billions of dollars in annual sales to the U.S. and world economy, invest hundreds of millions of dollars in research and development, hold thousands of United States patents, employ thousands of people both in the United States and overseas, and maintain membership in a variety of standard setting organizations ("SSOs").

SSOs, the standard setting process, and JEDEC standards in particular are of great importance to Amici. The goal of many SSOs, including JEDEC, is to set "open" standards that are broadly available, low cost, and free from restrictive patent rights. Such open standards are beneficial to manufacturers and consumers alike, because they ensure interoperability of standardized products supplied by different firms. This, in turn, promotes competition, increases market acceptance, and helps achieve economies of scale.

These benefits of open standards can be achieved, however, only when the members of an SSO act in good faith and refrain from deceptive and exclusionary conduct. When an SSO member engages in such anticompetitive conduct with respect to its patent rights, those patent rights improperly may allow one member of an SSO to hold-up the standard and charge monopolistic rates to use the standard, all to the detriment of direct participants in the standard, others in the industry, and consumers.

After a lengthy hearing and a detailed review of the evidence, the Commission determined that Rambus Inc. ("Rambus") engaged in bad faith and deceptive conduct in violation of the antitrust laws. Contrary to JEDEC's policy and practice, contrary to the expectations of JEDEC members and those who rely upon open JEDEC standards, and in breach of its duty of good faith, Rambus undermined the JEDEC standard setting process by concealing its patent rights from JEDEC, misleading JEDEC members into believing that Rambus was not seeking patents over JEDEC-compliant SDRAMs and DDR SDRAMs, and secretly tailoring its patent rights in an effort to cover the JEDEC standards.

In 2000, after the JEDEC standards had been adopted, and after the industry was locked-in to those standards, Rambus exercised the monopoly power it had acquired through its subversion of the standard setting process. It was only then that Rambus attempted to enforce its patent rights against the JEDEC standards through patent infringement lawsuits, through U.S. International Trade Commission enforcement proceedings, and through a licensing campaign. At least one Amicus was forced to pay royalties to Rambus in response to its licensing and litigation campaign.

Amici submit this brief to express their views on the appropriate remedy to redress Rambus's exclusionary conduct.

ARGUMENT

I. THE COMMISSION SHOULD BAR RAMBUS FROM ENFORCING ITS RELEVANT PATENT RIGHTS AGAINST THE JEDEC STANDARDS.

By failing to disclose its patent rights, and by other misleading conduct, Rambus led JEDEC and its members to adopt and implement technologies in the JEDEC standards that Rambus contends violate its patents. This, in turn, has given Rambus monopoly power. To remedy Rambus's antitrust violations, the Commission should bar Rambus from enforcing its

patent rights against the SDRAM standard, the DDR SDRAM standard, and successors of these JEDEC SDRAM standards.[1]

A. Under Its Remedial Authority, The Commission Has The Power To Bar Rambus From Enforcing Its Patents Against The JEDEC Standards.

The Commission enjoys broad authority to remedy antitrust violations. This authority is not confined to prohibiting the specific conduct that the Commission has found to be illegal. As the Supreme Court explained in *Ford Motor Co. v. United States*, 405 U.S. 562 (1972):

> [t]he relief which can be afforded under [the Sherman and Clayton Acts] is not limited to the restoration of the *status quo ante*. There is no power to turn back the clock. Rather, the relief must be directed to that which is "*necessary and appropriate* in the public interest *to eliminate the effects* of the acquisition offensive to the statute," or which will "*cure the ill effects* of the illegal conduct, and *assure the public freedom from* its continuance."

Id. at 573 n.8 (citations omitted).

The Supreme Court also has made clear that the public interest is the paramount guiding principle in the Commission's development of a remedy: "The public welfare demands that the agencies of public justice be not so impotent that they must always be mute and helpless victims of deception and fraud." *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238, 246 (1944). In recognizing in one case that an injunction against future violations was "not adequate to protect the public interest," the Supreme Court instructed:

> If all that was done was to forbid a repetition of illegal conduct, those who had unlawfully built their empires could preserve them intact. They could retain the full dividends of their monopolistic

[1] In this brief, when Amici refer to a remedy that limits enforcement of Rambus's "patent rights," Amici are referring to those patent rights, domestic and foreign, that claim priority to or through a patent application that was filed on or before June 17, 1996, the date that Rambus withdrew from JEDEC. The remedy proposed herein would not impact the dozens of Rambus patents (many of which Rambus has licensed) that claim priority to applications after June 17, 1996.

> practices and profit from the unlawful restraints of trade which they had inflicted on competitors.

Schine Chain Theatres v. United States, 334 U.S. 110, 128 (1948).

For these reasons, forward-looking remedies, such as "fencing in" violators, frequently are appropriate, especially when the anticompetitive conduct could be hidden. *FTC v. Ruberoid Co.*, 343 U.S. 470, 473 (1952) (explaining that fencing-in provisions serve to "close all roads to the prohibited goal, so that [the Commission's] order may not be by-passed with impunity").

Consistent with these authorities, the Commission has recognized that, when a patent owner subverts an SSO and misuses patent rights to hold-up a standard, the appropriate remedy is to bar the patent owner from enforcing its patent rights against the affected standard.

In *Dell*, for example, the respondent belonged to an SSO that considered, and ultimately adopted, a "VL-bus standard." The respondent had patent rights that covered the VL-bus standard, but the Commission found that respondent had failed to disclose those rights and misled the SSO into adopting the standard. To remedy the respondent's deceptive and exclusionary conduct, the Commission insisted on an order barring the respondent from enforcing its patents against the standard. *In re Dell Computer Corp.*, 121 F.T.C. 616, 624-25 (1996).

Similarly, in *Unocal*, the respondent presented technology to the California Air Resources Board and industry groups for a cleaner burning gasoline. The respondent represented to those bodies that its technology was non-proprietary. The respondent also influenced those bodies to incorporate its technology into industry regulations that established a statewide standard. At the same time, the respondent secretly prosecuted a patent that covered the technology. After the regulations were adopted, the respondent enforced its patent rights against

companies that complied with the standards, both through licensing and litigation. To remedy the respondent's deceptive and exclusionary conduct, the Commission again insisted on an order barring the respondent from enforcing its patent rights against gasoline that was made in compliance with the regulations. *In re Union Oil Co.*, no. 9305, 2005 WL 2003365 (F.T.C. Aug. 2, 2005).

Here, in the wake of a fully-litigated finding that Rambus violated the antitrust laws, there is even stronger reason to follow *Dell* and *Unocal* and bar Rambus from enforcing its patent rights against the JEDEC standards. Any lesser remedy would represent a step backward from the clear and consistent precedent the Commission already has established.

B. Barring Rambus From Enforcing Its Patents Against JEDEC Standards Is Consistent With The Commission's Liability Findings And The Evidence.

The Commission already has found that, had Rambus timely disclosed its patent rights, JEDEC would have adopted alternative technologies or, at the very least, would have demanded RAND assurances pursuant to JEDEC policy that bars the use of patented technologies without RAND assurances (Opinion at 74, 97).[2] Under either scenario, Rambus should be barred from enforcing its patent rights against the JEDEC standards. On the one hand, if JEDEC had adopted alternatives, Rambus would not be in a position today to enforce its patent rights against the standards. On the other hand, if JEDEC had demanded RAND assurances, JEDEC still would not have adopted Rambus's technologies, because the evidence makes clear that Rambus never would have offered RAND assurances to JEDEC. Because Rambus would not be in a position now to enforce its patent rights against the JEDEC standards had it acted in

[2] As used herein, "RAND assurances" means assurances that relevant patents would be licensed to all on reasonable and nondiscriminatory terms.

good faith and consistent with JEDEC's policies, practices, and expectations, the remedy should bar such enforcement.

1. JEDEC Would Have Adopted Alternatives To Rambus's Patented Technologies.

To begin with, the record evidence strongly shows that JEDEC would have adopted alternative non-infringing technologies had Rambus disclosed its patent rights. This is fully consistent with JEDEC's policies and historical practice.

The goal of JEDEC was to adopt open standards that were not encumbered by patent rights. CCFF 300, 301.[3] JEDEC policy provided that JEDEC should avoid using patented technologies. CCFF 303. Even Richard Crisp, Rambus's JEDEC representative, understood that "[t]he job of JEDEC is to create standards which steer clear of patents which must be used to be in compliance with the standard whenever possible." CCFF 301. JEDEC insists on open standards because everyone can use them, because they are not subject to hijack or the exercise of market power, and because they cost less to use (as royalties are generally avoided). CCFF 300, 302, 303.

Consistent with this policy, and as the Commission has recognized, when JEDEC knew of Rambus's patent rights and thought they might be relevant to a JEDEC standard, JEDEC "took deliberate steps to avoid standardizing the Rambus technology." Opinion at 74 & n.403 (describing JEDEC's immediate steps to avoid Rambus's "loop-back clock" technology in its '703 patent when NEC made a "loop-back clock" proposal in 1997). *See also* CCFF 2436-2439. Similarly, when JEDEC learned that patent rights might cover the Quad CAS standard

[3] Citations to "CCFF" are to Complaint Counsel's Proposed Findings of Fact, Conclusions of Law, and Order, dated September 5, 2003.

and the silicon signature standard, JEDEC took affirmative steps to avoid the patented technologies. CCFF 422, 424-432 (Quad CAS); CCFF 433 (silicon signature).

Numerous industry members testified that they would have adopted alternative technologies at JEDEC had Rambus timely disclosed its patents rights. CCFF 2101. *See also* Opinion at n.407. Given JEDEC's policies and history, there is no reason to doubt this testimony.

Incorporating alternative technologies into the JEDEC standards not only would have been consistent with JEDEC policy and practice, but it also would have been feasible. The Commission already has determined that "[a]lternative technologies were available when JEDEC chose the Rambus technologies, and could have been substituted for the Rambus technologies had Rambus disclosed its patent position." Opinion at 76. The Commission also has found that "the evidence does not establish that Rambus's technologies were superior to all alternatives on a cost/performance basis." Opinion at 82.

2. Rambus Would Not Have Offered The Required RAND Assurances.

Even assuming *arguendo* that JEDEC's first response would have been to demand RAND assurances, JEDEC ultimately would not have incorporated Rambus's claimed technologies into the JEDEC standards, because Rambus never would have provided JEDEC with the required RAND assurances. The evidence in the record on this point is conclusive.

To understand why Rambus would not have offered RAND assurances, it is important to understand Rambus's business model. This model involved developing proprietary technology, patenting the technology, and then securing royalties and fees by licensing the technology and enforcing its patents (through licensing or litigation). This was Rambus's sole source of revenue. Rambus did not manufacture or sell any products. As Rambus's contemporaneous documents make clear, RAND terms were inconsistent with Rambus's

business model and its business practices of charging the highest royalty rates it could and of refusing to license those it did not wish to license. CCFF 2419, 2427, 2432.

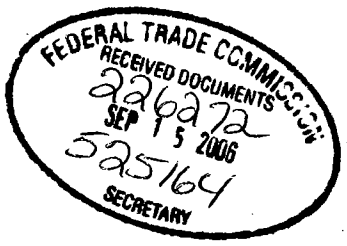
Consistent with its business model, Rambus manifested its disdain for RAND assurances on at least two relevant occasions. First, in response to a request from IEEE – another standard-setting organization – that Rambus provide RAND assurances, Rambus refused to do so. CCFF 2421-2426. Second, when Rambus withdrew from JEDEC, it stated that it was doing so because JEDEC's rules were not consistent with Rambus's business plan. CCFF 2428-2431. Given this evidence, there is no reason to believe that Rambus would have offered RAND terms to JEDEC.

Moreover, even assuming *arguendo* that Rambus had offered RAND terms, given Rambus's business model as described above, there is no reason to believe that JEDEC members would have believed or accepted Rambus's assurances. In fact, because Rambus was actively promoting its own RDRAM architecture, JEDEC would have been especially reluctant to adopt any standard that was allegedly covered by Rambus's patents.

C. The Enforcement Bar Should Be Broad Enough To Further The Aims Of The Antitrust Laws.

1. The Remedy Should Extend To The DDR2 SDRAM Standard And Other Successor Standards.

The Commission found that Rambus's exclusionary conduct is linked to JEDEC's adoption of SDRAM and DDR SDRAM standards that incorporate four technologies over which Rambus claims rights – namely, programmable CAS latency, programmable burst length, dual-edge clocking, and on-chip PLL/DLL. Opinion at 77. The Commission also found that JEDEC's adoption of standards that incorporate these technologies is linked to Rambus's monopoly power. *Id.*



NOTICE OF APPEARANCE
BEFORE THE FEDERAL TRADE COMMISSION

DOCKET No. 9302

In the Matter of RAMBUS INCORPORATED.

The below counsel enter their appearances on behalf of *Amicus Curiae* Hynix Semiconductor, Inc.

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Dated: September 15, 2006

Given these findings, and given that JEDEC would not have included the four patented technologies in the SDRAM or DDR SDRAM standards, the Commission's remedy certainly should bar Rambus from enforcing its patent rights against the SDRAM and DDR SDRAM standards. Allowing Rambus to enforce its patents against these standards would not restore competition and would allow Rambus to continue to exercise monopoly power.

The bar, however, should not be limited to the specific SDRAM and DDR SDRAM standards. Rather, the bar should extend to all JEDEC standards that are successors to the SDRAM and DDR SDRAM standards, including the DDR2 SDRAM standard. This remedy is needed to restore competitive conditions and protect the legitimate and pro-competitive expectations of JEDEC participants and others in the industry who rely on JEDEC standards. Because the four technologies as to which the Commission found a violation would not have been included in the SDRAM or DDR SDRAM standards had Rambus timely disclosed its patent rights, and because JEDEC standards evolve from one another, successor JEDEC DRAM standards (such as DDR2 SDRAM) also would not have included the four claimed features. There is no evidence that JEDEC would have *added* the four claimed features to the DDR2 SDRAM standard had they not already been included in the SDRAM and DDR SDRAM standards. Allowing Rambus to enforce its patent rights against successor JEDEC DRAM standards would unfairly allow Rambus to profit from its deceptive and exclusionary conduct, to the detriment of the industry and consumers.

The record demonstrates clearly that JEDEC's inclusion of the four patented technologies in the DDR2 SDRAM standard stems directly from the fact that those technologies were included in the first DDR SDRAM standard. The evidence uniformly shows that JEDEC standards are evolutionary. That is, each JEDEC standard is built on, and incorporates, as much

of the prior standards as possible. CCFF 127. JEDEC does this because evolutionary change reduces costs and eases the introduction of new standards. CCFF 128. This is true for DRAM manufacturers, logic chip makers, and OEMs. CCFF 128.

Here, the evidence shows that the DDR2 SDRAM standard evolved directly from the initial DDR SDRAM standard. CCFF 2573. The JEDEC committee that began working on DDR2 SDRAM in 1998 voted to use DDR SDRAM as the "baseline" for DDR 2 SDRAM. CCFF 3236-3237.[4] As a result, the four purported Rambus technologies in DDR SDRAM were incorporated into the DDR2 SDRAM standard. CCFF 3250-3261.

Given the evolutionary nature of JEDEC standard development, and given JEDEC's strong desire to ensure backward compatibility, if JEDEC's SDRAM and DDR SDRAM standards had not included Rambus's claimed features, then JEDEC's DDR2 SDRAM standard also would not have included those patented features.[5] Because Commission remedies endeavor to restore markets to the competitive conditions that would have existed but for the unlawful conduct, and because JEDEC would not have included those four features in the DDR2 SDRAM standard but for their inclusion in the original SDRAM and DDR SDRAM standards, the remedy should bar Rambus from enforcing its patent rights against DDR2 SDRAM and

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[4] One of the benefits of having the initial DDR SDRAM standard serve as the baseline for DDR2 SDRAM was "backward compatibility." CCFF 3244. Because the primary features of DDR2 SDRAM would be the same as DDR SDRAM, DRAM manufacturers could make and sell DDR2 SDRAMs that would be compatible with many of the same components and systems that had been designed and built to be compatible with the DDR SDRAM standard, thereby reducing the manufacturers' risk in the event that the new standard is not adopted quickly. CCFF 3247-3248. Similarly, backward compatibility reduced the risk to memory controller manufacturers, because they could design a controller that could work with both standards. CCFF 3246, 3249.

[5] This conclusion is fully consistent with the Commission's finding that, on the current record, it is unclear whether Rambus possessed durable monopoly power over DDR2. Even if JEDEC could in principle have switched *away* from Rambus technologies in DDR2 after those technologies had been incorporated in SDRAM and DDR, there is (as discussed) no reason why JEDEC members would have chosen to *add* those technologies to DDR2 had they not been present in prior standards in the first place.

similar successor JEDEC DRAM standards as well. *Ecko 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). If Rambus were allowed to enforce its patent rights against DDR2 SDRAM or other successor JEDEC DRAM standards, Rambus would receive an unjust windfall – the opportunity to use its monopoly power to recover supracompetitive profits against a standard that would not include Rambus's patented features but for Rambus's misconduct.[6]

2. The Remedy Should Protect The JEDEC Standards As A Whole, Not Just The Four Technologies That Rambus Monopolized.

In remedying exclusionary conduct, the Commission need not limit its remedy solely to the misconduct at issue. *FTC v. Ruberoid Co.*, 343 U.S. 470, 472-74 (1952) ("If the Commission is to attain the objectives Congress envisioned, it cannot be required to confine its road block to the narrow lane the transgressor has traveled; it must be allowed effectively to close all roads to the prohibited goal, so that its order may not be by-passed with impunity.").

JEDEC members and others anticipated that the technologies it adopted for its SDRAM and DDR SDRAM standards would be available for future versions of the synchronous DRAM standard: Indeed, both economic efficiency in design and production, as well as backward compatibility for computer system designers, require as much. Accordingly, the Commission should not simply preclude Rambus from enforcing its patent rights against the four technologies that Rambus monopolized through its deceptive conduct. Rather, Rambus should be barred from enforcing its patent rights against the JEDEC SDRAM and DDR SDRAM standards and successor JEDEC SDRAM standards, such as DDR2 SDRAM. If the standards as a whole are not protected from attack, and if Rambus is allowed to enforce its patents against

[6] The magnitude of potential harm to the market is clear. DDR2 SDRAM is expected to represent over 50% of all DRAM sales in 3Q2006 and grow to over 70% in 2007. *See* iSuppli Q2 2006 report attached hereto as Exhibit 1.

technologies other than the four it already has monopolized, then there will be a very real risk that Rambus will once again achieve monopoly power over the JEDEC standards through virtually identical misconduct that was directed towards additional standardized technologies.

The record shows that while Rambus was a JEDEC member, JEDEC discussed many features for inclusion or possible inclusion in a JEDEC standard, including features called low-swing voltage, external reference voltage, auto precharge, multi-bank design, and source-synchronous clocking. CCFF 545-557, 645-648, 856, 3118, 3121-3182. The record also shows that while Rambus was a JEDEC member, Rambus had, or believed it could file, patent applications covering the same five features. CCFF 857, 886, 888, 964-967, 967, 981, 1000-1003, 1045, 3119, 3121-3182. Yet, Rambus never disclosed to JEDEC that it had, or believed it could file, patent applications covering these features. CCFF 3120, 3121-3182. Rambus is now obtaining patents that are directed to these same undisclosed features. *See, e.g.,* CCFF 3117 (patent issued with claim relating to auto precharge).

Clearly, if the Commission's order is limited to the four technologies over which Rambus has asserted patent rights in litigations, and ignores additional technologies on which Rambus had not yet brought suit when this investigation began, there is a significant risk that Rambus will be permitted to achieve its monopolistic aims and secure the very result (monopoly power over JEDEC standards) through the very same conduct (deceptively failing to disclose its patent rights to JEDEC during the standard-setting process) that led the Commission to conclude that Rambus had violated the antitrust laws.

3. The Remedy Should Extend To JEDEC-Compliant DRAMs Manufactured Or Sold Overseas.

To ensure that the remedy it chooses fully restores competition in U.S. commerce, including U.S. import and export commerce, the Commission should bar Rambus from enforcing

its foreign patent rights against the SDRAM and DDR SDRAM standards, including successor JEDEC DRAM standards such as DDR2 SDRAM, to the extent that such overseas enforcement would reach imports from, or exports to, the United States.

Rambus has obtained foreign patent rights that it claims cover the same four technologies as to which the Commission has found a violation. CCFF 1968-1974, 3214-3215. Rambus has asserted those foreign patent rights against JEDEC-compliant SDRAMs and DDR SDRAMs in foreign lawsuits, including in the United Kingdom, Germany, France, and Italy. CCFF 2026-2027, 3212, 3216-3219. Those foreign patents claim priority to or through patents and applications that Rambus filed on or before its withdrawal from JEDEC on June 17, 1996. CCFF 2024, 3184.

To restore competition in U.S. commerce, and in the U.S. import and export markets, any remedy should prevent Rambus from enforcing its foreign patent rights against the JEDEC standards. This is so for at least two reasons.

First, the JEDEC standards are worldwide standards. CCFF 3188. The same JEDEC standards that govern the manufacture and sale of JEDEC-compliant DRAMs in the United States also govern the manufacture and sale of JEDEC-compliant DRAMs overseas. CCFF 3188. Thus, by failing to disclose its U.S. patent rights to JEDEC, and by engaging in misleading conduct about its patents, Rambus denied JEDEC the opportunity to adopt standards that would have avoided Rambus's foreign patent rights.

Second, permitting Rambus to enforce its foreign patents against the JEDEC standards will injure competition in the United States. The Commission has found that the technology markets that Rambus monopolized are worldwide. Opinion at 5 n.3. Consistent with this finding, the record shows that JEDEC standard parts are freely exported from, and imported

into, the United States in large volumes. CCFF 3190. Indeed, the United States is a net importer of DRAM. CCFF 3183. Moreover, SDRAM and DDR SDRAM are manufactured by companies that have operations in the United States and overseas. CCFF 3189-3198. Thus, if JEDEC members, for example, are enjoined under Rambus's foreign patents from making SDRAM in Europe and exporting those SDRAMs to the United States, the supply of SDRAMs in the United States will be disrupted, resulting in price increases and harm to U.S. consumers. *See* CCFF 3183, 3221-3224. Rambus itself has suggested that if it can succeed in enforcing its patent rights against JEDEC SDRAM in one major jurisdiction, it will disrupt markets for SDRAM in other jurisdictions. CCFF 3226. To ensure that competition in the United States is restored, the Commission must ensure that Rambus cannot capture the JEDEC standards by enforcing foreign patents against them.[7]

D. An Enforcement Bar Is Consistent With Remedies Available In Patent Cases.

A patent enforcement bar of the sort discussed above is fully consistent with the relief that courts award when a patent owner is equitably estopped from enforcing its patents. *A.C. Aukerman Co. v. R.I. Chaides Constr. Co.*, 960 F.2d 1020, 1028 (Fed. Cir. 1992). The elements of equitable estoppel are: (1) misleading conduct by the patentee, (2) reliance by the alleged infringer, and (3) prejudice if the patent were to be enforced against the relying alleged infringer. *Id.* at 1028. Equitable estoppel need only be proven by a preponderance of the

[7] The Commission has the authority to order a company to cease and desist from enforcing foreign patents when necessary to remedy a violation of the antitrust laws. In the past, the Commission has obtained consent orders which bind the parties to refrain from enforcing non-U.S. patent rights. *See, e.g., In re Xerox Corp.*, 86 F.T.C. 364 (1975); *In re Dell Computer Corp.*, 121 F.T.C. 616, 621 (1996). In the Clayton Act §7 context, *see In re Glaxo Wellcome, plc*, 2001 WL 147161 (F.T.C. Jan. 26, 2001); *In re Roche Holdings, Ltd.*, 113 F.T.C. 1086 (1990).

evidence. *Id.* at 1040-41. When equitable estoppel is established, a court will bar the patent owner from enforcing its patent rights.[8]

Here, the Commission's findings clearly satisfy all of the elements of equitable estoppel. The Commission expressly found that "Rambus engaged in representations, omissions, and practices that were likely to mislead JEDEC members acting reasonably under the circumstances, to their substantial detriment, and . . . that Rambus willfully engaged in deceptive conduct." Opinion at 68. These misrepresentations included Rambus's representation that it did not have patents or applications that would cover implementations of the JEDEC standards under discussion. *Id.* at 4. The Commission further found reliance by JEDEC's members on Rambus's misleading conduct when they unknowingly adopted the standards that Rambus now contends are covered by its patents, and thereafter when they designed and produced products conforming to those standards. *Id.* at 78. Prejudice to JEDEC's members from Rambus's enforcement of its patents against products that consist of, or interface with, JEDEC standard products, and collection of royalties on those products, is particularly evident in light of the Commission's finding of Rambus's durable monopoly power. *Id.* at 77-78, 110.[9]

Barring Rambus from enforcing its patent rights also is consistent with the doctrine of patent misuse. Patent misuse is an "extension of the equitable doctrine of unclean hands, whereby a court of equity will not lend its support to enforcement of a patent that has been misused." *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1427 (Fed. Cir. 1997).

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[8] *See, e.g., Potter Instrument Co., Inc.* v. *Storage Technology Corp.*, 641 F.2d 190 (4th Cir.), *cert. denied*, 454. U.S. 832 (1981); *Wang Laboratories Inc.* v. *Mitsubishi Electronics America Inc.*, 29 U.S.P.Q.2d 1481 (C.D. Cal. 1993); *Stambler v. Diebold, Inc.*, 11 U.S.P.Q.2d 1709, 1715 (E.D.N.Y. 1988), *aff'd*, 878 F.2d 1445 (Fed. Cir. 1989).

[9] Rambus itself understood that its deceptive conduct could create issues of equitable estoppel For example, Lester Vincent (Rambus's outside patent counsel) admitted in documents that "there could be an equitable estoppel problem if Rambus creates impression on JEDEC that it would not enforce its patent or patent [applications]." CCFF 422.