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FTC V. RAMBUS: DID THE COMMISSION GET THE REMEDY RIGHT?

By Logan Breed[1]

As technology becomes an increasingly ubiquitous part of our everyday lives, the companies that design and manufacture that technology have often turned to standard setting organizations ("SSOs") to ensure compatibility between their products. Done properly, these endeavors are undeniably procompetitive – they can reduce costs, facilitate interoperability, increase consumer choice, and enable economies of scale.[2] However, standard setting also creates opportunities for anticompetitive behavior of many stripes, including price-fixing, reductions in non-price competition, and other coordination between competitors.[3] The Federal Trade Commission ("FTC" or "Commission") has found that a participant in a SSO may have a unique opening to deceive the other members of the SSO by withholding or hiding information about its intellectual property portfolio. When the deception is effective and the SSO unknowingly incorporates the offender's technology into its standard, the SSO has in effect unwittingly awarded the deceptive firm with a monopoly over that piece of the standard (and potentially the entire standard if there is no other royalty bearing IP involved). Such deception is often referred to as anticompetitive "patent hold-up."

The anticompetitive effect of such deception and the increasing importance of effective standard setting practices in technology industries led the FTC to pursue several investigations of deceptive conduct in the standard-setting process over the last decade under Section 5 of the FTC Act[4] in an effort to dissuade "bad actors" from taking advantage of the standard setting process.[5] First, in 1996 the FTC sought and obtained a consent order against Dell Computer Corp. because it told an SSO that it did not own any patent rights regarding a proposed standard for the personal computer VL-bus — a mechanism to transfer instructions between the computer's central processing unit and peripherals, such as a disk drive — and then tried to enforce its patent rights against companies that practiced the standard after the SSO incorporated its technology into the standard.[6] Second, in 2003 the FTC brought an administrative enforcement action against the Union Oil Company of California ("Unocal") for misrepresenting information about its patent rights regarding the production of its low-emissions fuel to the California Air Resources Board ("CARB"), a state regulatory agency that was creating industry standards for the development of reformulated gasoline.[7]

Then, in June 2002, the FTC brought an administrative action against Rambus, Inc. for allegedly deceiving the JEDEC Solid State Technology Association ("JEDEC") SSO into incorporating Rambus's technology in its standards for synchronous dynamic random access memory chips

("SDRAM").[8] As a JEDEC member, Rambus participated in the standard-setting process for various technologies associated with dynamic random access memory ("DRAM") for computers. JEDEC had several policies and practices designed to prevent anticompetitive holdup, including that JEDEC's members were expected to reveal the existence of patents and patent applications that could later be enforced against those who practice the standard. The FTC determined that Rambus had disregarded these policies and expectations, refusing to disclose its relevant patents and patent applications.[9] Moreover, the FTC found that Rambus had used the information that it gained about the pending standard to amend its patent applications in order to ensure that the final standard would incorporate its technology.[10]

Rambus and *Unocal* were originally parallel cases; the former involved a claimed deception of a private SSO and the latter involved a claimed deception of a public SSO. However, the *Unocal* case settled when Chevron acquired Unocal and agreed as part of the merger settlement not to enforce the patent in question.[11] Consequently, *Rambus* is the first case involving monopolization by deception of an SSO that the FTC has fully litigated.

The *Rambus* case was so complex that the FTC divided its analysis into two stages. In August 2006, it issued a decision on liability, unanimously holding that Rambus had engaged in monopolization by withholding and concealing information regarding relevant patents and patent applications that were highly material to the SDRAM standard-setting process.[12] In February 2007, following briefing and argument on the subject of remedy, the FTC ordered compulsory licensing by Rambus of its technology at Commission-determined maximum rates for a period of three years, after which the maximum rate drops to zero.[13] Two Commissioners, J. Thomas Rosch and Pamela Jones Harbour, filed concurring opinions in which they argued for broader remedies.[14]

The majority opinion on the remedy issue, authored by Chairman Deborah Platt Majoras, defended the FTC's authority to order compulsory licensing at a royalty rate determined by the FTC based on the conditions that would have occurred but for the defendant's deception (*i.e.*, the *ex ante* bargaining position of the parties) – even if the result was a compulsory royalty-free license. However, a majority of the Commissioners ultimately chose to impose a less severe remedy despite significant evidence that JEDEC would have adopted alternative technologies in the "but for" world, which would have resulted in Rambus's receiving no royalties. Moreover, the compulsory licensing remedy did not cover Rambus's patents as applied in the most recent (and commercially significant) iteration of the relevant standard, called "DDR2 SDRAM."

Given (1) Rambus's clearly anticompetitive conduct as determined by the Commission, (2) the strong factual predicate found by the Commission for the premise that JEDEC would not have adopted Rambus's technology but for its deception, and (3) the majority opinion's strong position regarding its "broad discretion to restore competition,"[15] it is somewhat surprising that the FTC chose to impose a more modest remedy than Complaint Counsel sought in this case. This article explores the difference between the FTC's statements about the scope of its remedial power and its actual use of that asserted power in the *Rambus* case, and suggests that the majority's attempt to craft an economically viable remedy may have missed the forest for the trees in this particular case.

Commission's Liability Decision

The FTC issued an administrative complaint against Rambus on June 18, 2002, alleging that Rambus's failure to disclose its intellectual property caused JEDEC members to believe that Rambus had no relevant patent rights or pending patent applications, and therefore that JEDEC had involuntarily adopted standards that infringed Rambus's patents.[16] The complaint contained three substantive alleged violations of Section 5: (1) Rambus monopolized SDRAM technology markets; (2) Rambus attempted to monopolize those markets; (3) Rambus unreasonably restrained trade in the SDRAM technology markets and engaged in unfair methods of competition.[17] The complaint alleged that Rambus actively concealed its efforts to develop relevant patents "in violation of JEDEC's own operating rules and procedures."[18] Moreover, it alleged that Rambus made false and misleading statements to JEDEC that created the "materially false and misleading impression that [Rambus] possessed no relevant intellectual property rights" and had no plans to enforce any future intellectual property rights against the standard.[19]

Rambus decisively won the first round of the battle. The Administrative Law Judge ("ALJ") dismissed the complaint, finding that Rambus's monopoly power was the product of its superior technology and market preferences rather than deception.[20] The ALJ found no basis for Complaint Counsel's inference that Rambus had intended to deceive JEDEC.[21] He determined that JEDEC (and the DRAM industry generally) was aware of Rambus's patent portfolio before it adopted the relevant standards, so JEDEC could not have reasonably relied on any omissions or affirmative misrepresentations by Rambus in the standard setting process.[22] Furthermore, he found that Complaint Counsel had failed to prove that JEDEC had viable alternatives to Rambus's technology, so the challenged conduct had no anticompetitive effect even if Rambus did deceive the SSO.[23] Finally, the ALJ concluded there was insufficient evidence that the prior deception led to the adoption of Rambus's technology in standards adopted after its departure, i.e., JEDEC was not "locked in" to Rambus's technology when it created subsequent versions of the relevant standard.[24]

Complaint Counsel appealed the Initial Decision to the Commission for review. In a unanimous opinion authored by Commissioner Pamela Jones Harbour, the Commission reversed the ALJ's Initial Decision, finding that Rambus had "violated Section 5 of the FTC Act by engaging in exclusionary conduct that contributed significantly to the acquisition of monopoly power in four relevant and related markets."[25] In particular, the Commission found that Rambus "capitalized on JEDEC's policy and practice – and also on the expectations of the JEDEC members" – by (1) refusing to disclose its patents and applications, and (2) actively misleading JEDEC about its efforts to seek patents that would cover implementations of the JEDEC standards.[26] The Commission authoritatively stated that "there is little room for dispute about what Rambus did" because there was overwhelming evidence of Rambus's misconduct from Rambus's own documents and witnesses.[27]

Notably, the Commission based its determination of deception on evidence of what the JEDEC members understood the rules to be rather than on a strict legal analysis of the texts that governed JEDEC members' obligations to the organization. Instead of focusing solely on JEDEC's written policies, the Commission considered "the totality of the circumstances in which [Rambus's] conduct occurred"[28] – including evidence related to Rambus's understanding of JEDEC's policies, other JEDEC members' testimony concerning their understanding of JEDEC's policy objectives, and the behavior of JEDEC when members attempted to enforce their patents after Rambus failed to disclose them. The Commission determined that the JEDEC members' reasonable expectations were the dispositive factual predicate for a finding of liability – and that Rambus had "played on these expectations" to achieve an anticompetitive result.[29] This focus on what those involved in the standard-setting process expected, rather than on an analysis of their obligations under the rules of the standard-setting organization, is somewhat novel in an antitrust case based on a monopolization theory, although there are analogous principles in the "good faith" requirements of consumer protection law.[30]

Once the deception element was established, it was relatively easy for the Commission to find a monopolization violation. First, it found a sufficient causal link between Rambus's conduct and JEDEC's decision to incorporate Rambus's technology into its standards. Again, the Commission relied on documentary evidence of Rambus's intentions, the testimony of JEDEC members, and the behavior of JEDEC members to find causation. Second, the Commission held that the incorporation of Rambus's technology into the JEDEC DRAM standards gave Rambus monopoly power over those standards as "a natural consequence of DRAM industry attributes."[31] Finally, the Commission found sufficient "lock-in" to give Rambus durable monopoly power. In other words, switching costs were high enough that JEDEC had no choice but to continue using Rambus's technology even after the deception was revealed. However, the Commission found that the evidence did not support an inference that this lock-in effect extended to DDR2 SDRAM, the most recent relevant JEDEC standard, because it was adopted after Rambus's misconduct had been uncovered[32] and the record contained insufficient evidence to establish that backward compatibility concerns "substantially contributed" to lock-in.[33]

While the Commission reached a unanimous consensus that the ALJ's Initial Decision was wrong on almost every point, the Commissioners decided that they could not determine the proper remedy without additional information, and, consequently, ordered the parties to brief and argue the remedy issue separately. Perhaps tipping its hand on the nature of the internal disagreement among the Commissioners on the remedy issue, the Commission specifically requested that the parties propose means to determine "reasonable royalty rates" based on the existing record, "qualitative characteristics descriptive of appropriate relief," and "appropriate injunctive and other provisions that should be incorporated into the Final Order."[34]

Remedy Decision

The Commissioners' unanimity disintegrated on the remedy issue, although no Commissioner was persuaded by Rambus's argument that the only proper remedy was a "cease and desist" order regarding future anticompetitive conduct.[35] Chairman Majoras, writing for herself, Commissioner Kovacic, and Commissioner Leibowitz, held that Rambus must accept Commission-established maximum royalty rates on Rambus's patented technology as applied to JEDEC's SDRAM and DDR SDRAM standards for a three-year period, after which the royalty rate will drop to zero.[36] The opinion based its calculations on an effort to determine the rate that most likely would have resulted from negotiations between the parties before JEDEC unwittingly adopted Rambus's technology (*i.e.*, when the industry had not yet invested in Rambus's technology and JEDEC had more bargaining power). Commissioner Rosch issued a separate opinion in which he stated that he believed there was sufficient evidence to order royalty-free compulsory licenses on Rambus's patented technology as applied to JEDEC's SDRAM and DDR SDRAM standards. Commissioner Harbour, the author of the Commission's Liability Decision, also issued a separate remedy opinion. She agreed with Commissioner Rosch that a zero-royalty license was appropriate in this case, but she also argued that the remedy espoused by the majority was insufficiently broad to restore the "but for" world because it did not include the DDR2 SDRAM standard.

As these concurring opinions suggest, the two key remedy issues (from both a legal and a practical perspective) were (1) whether the Commission should impose royalty-free licenses and (2) whether the remedy should cover Rambus's technology as applied to DDR2.

Issue #1: The Commission declined to require royalty-free licenses

The majority opinion acknowledged that the fundamental question at issue was the proper scope of the FTC's remedial power: "The Supreme Court has not yet addressed the scope of the Commission's remedial authority where, as here, the Commission has applied the legal standards of Section 2 of the Sherman Act."[37] Despite (or perhaps because of) this uncertainty, the Commission asserted that it has broad power "to create a forward-looking remedy" that "restor[es], to the extent possible, the competitive conditions that would have been present absent Rambus's unlawful conduct."[38] Moreover, the majority opinion added that the Commission has "wide latitude for judgment" on the proper remedy as long as it bears a "reasonable relationship to the unlawful practices that the Commission has found."[39] The Commission affirmed that its remedial authority extends to compulsory licenses, citing its own forty year-old dicta to support the proposition that it has the authority to order royalty-free compulsory licenses.[40] However, the majority opinion declined to require royalty-free licensing in *Rambus* because "Complaint Counsel have not met the burden of demonstrating that restoring the competition that would have existed in the 'but for' world requires that Rambus license its technology with no compensation."[41]

This result is somewhat notable because it is clear from the Liability Decision that the Commission believed that Rambus intentionally hid its intellectual property in order to get JEDEC to adopt its technology without a commitment to license the technology on reasonable and non-discriminatory ("RAND") terms.[42] The Commission found that: (1) Rambus's conduct was "calculated" to mislead; (2) Rambus failed to disclose its patent applications despite repeatedly being advised by its own counsel that it faced equitable estoppel if it did not make such disclosure; (3) Rambus avoided disclosing its patent position for the "very reason" that it understood such information would be material to JEDEC; and (4) Rambus "intentionally and willfully engaged in deceptive conduct."[43] The majority opinion even went so far as to state that "Rambus's intentional and willful deception … is sufficient, without more, to justify broad fencing-in relief."[44]

As noted above, the Commission called upon on the standard for "deception" articulated in its consumer protection jurisprudence – *i.e.*, strong evidence of what the JEDEC members understood the SSO's disclosure rules to be in practice – to determine that JEDEC had detrimentally relied on Rambus's deception to its detriment.[45] The Commission found that JEDEC "could have turned to unpatented alternative technologies in each of the relevant product markets."[46] It also found that "the evidence does not establish that Rambus's technologies were superior to all alternatives on a cost/performance basis"[47] and that "[w]ith regard to cost, Rambus failed to demonstrate that alternatives would have been more expensive."[48] Finally, and of particular significance, the Commission determined that Rambus's misconduct – *not* the superiority of Rambus's technology – caused JEDEC to adopt

Rambus's technology instead of one of those alternatives.[49] In addition to these findings, the record contained evidence that Rambus had clearly demonstrated at least twice that it would not commit to RAND terms.[50] In short, the Liability Decision laid the factual groundwork to conclude that JEDEC would have adopted a different technology in the "but for" world – leaving Rambus out in the cold with no royalties.

On the other side of the ledger, the Liability Decision found no factual evidence to support Rambus's proposition that it would have agreed to RAND terms in the "but for" world rather than allowing JEDEC to incorporate a competing technology. The only record evidence that Rambus proffered in support of this contention was testimony from its expert economist, who stated that it would have been in Rambus's economic interest to do so. However, even if that were true, the record provided ample evidence that Rambus was willing to act against its short-term self-interest in licensing RDRAM and would not have been likely to accept RAND royalty rates.[51] As the majority opinion noted, "Rambus was so desperate to avoid having to license on RAND terms that it chose to deceive JEDEC rather than to succumb."[52]

Nevertheless, the Commission ultimately determined that Complaint Counsel did not sufficiently demonstrate that a royalty-free license was "require[d]" to restore the competition that would have existed in the "but for" world.[53] The Commission was particularly concerned that its remedy should extend only so far as absolutely necessary to restore the competitive conditions that would have existed absent the anticompetitive conduct.[54] The majority of the Commissioners believed this mandate compelled them to determine the cost to JEDEC members if JEDEC had adopted non-Rambus technology, rather than the amount of royalties that Rambus would have received if JEDEC had adopted some other technology (i.e., zero). In other words, for the Commission to impose a royalty-free remedy, it "must conclude on the basis of the record that in the 'but for world' … Rambus would not have obtained any royalties."[55]

Of course, as the Commission noted,[56] it is difficult to ascertain with any certainty what would have happened if Rambus had not violated the law. While the Commission believed that it had the power to impose royalty-free licenses, it also believed that power was subject to "important limits" and may require "special proof."[57] The key question is where those limits lie. How much proof is necessary to impose royalty-free licensing? Complaint Counsel argued that because the Liability Decision provided the requisite link between Rambus's misconduct and its acquisition of monopoly power, Rambus should bear the risk of the uncertain consequences of its conduct – and therefore "any doubts regarding the remedy are resolved against the wrongdoer."[58] The Commission did not address this argument directly, but apparently it disagreed – it refused to order royalty-free licensing because it was not sufficiently certain that Rambus would have been shut out of JEDEC in the "but for" world. The majority opinion stated Complaint Counsel failed to prove that "absent Rambus's deception, JEDEC would not have standardized Rambus' technologies, thus leaving Rambus with no royalties,"[59] despite the fact that the Commission had already determined that Rambus's misconduct was the reason that JEDEC adopted its technology.[60]

The majority relied heavily on the fact that JEDEC's policies did not absolutely prohibit the incorporation of patented technologies on RAND terms, noting that JEDEC had incorporated such technologies in the past.[61] Apparently, the "special proof" required by the Commission was proof that JEDEC had never incorporated – and would never incorporate – a patented technology with a RAND commitment. Given the difficulty in reconstructing the "but for" world with any degree of certainty, it appears likely that Complaint Counsel will find it difficult to meet this high standard in future cases.

Issue #2: The Commission's Remedy Excludes DDR2

The second significant issue for the Commission to resolve was the proper scope of the remedy. In particular, Complaint Counsel advocated that, although the Liability Decision did not find Rambus liable with respect to monopolizing the DDR2 SDRAM standard, the Commission's remedy should extend to that standard because Rambus's monopoly power in DDR2 "bears a reasonable relation to the unlawful practices found to exist"[62] and it was necessary to cure the "hang-over of the long-existing pattern of [anticompetitive conduct]" (i.e., it was necessary to restore competitive conditions).[63] The Commission disagreed, rejecting Complaint Counsel's theory that deception on earlier technologies locked the JEDEC members into DDR2 (which was adopted after Rambus had resigned from the organization) – even though the majority opinion conceded that "there is no doubt that some relationship exists between

Rambus's deceptive conduct and its position in the DDR2 SDRAM market."[64]

From a practical perspective, limiting the remedy to SDRAM and DDR SDRAM severely curtails its effectiveness. Wall Street treated the remedy decision as a clear victory for Rambus – on the day that the Commission issued its Final Order, the value of Rambus's stock increased 24 percent.[65] This is because most major computer manufacturers now use primarily DDR2, even in their entry-level products.[66] Moreover, industry analysts predict that DDR2 products will comprise over 77 percent of DRAM revenues in 2007, and over 84 percent in 2008.[67] By excluding the commercially dominant standard, the Commission's decision will only have a relatively marginal impact on the victims of Rambus's misconduct. The Commission recognized that its decision "will have declining impact as the market progressively shifts to DDR2," but it refused to apply any remedy to DDR2.[68] Because the Commission found the existence of "some relationship" between Rambus's misconduct and DDR2, there is reason to doubt that this result is correct.

Commissioner Harbour filed a concurring statement in which she argued that the remedy should extend to DDR2. According to Commissioner Harbour, perhaps the central problem with the majority opinion's approach to the DDR2 issue is that it focused on the *feasibility* of designing around Rambus's patents rather than the *prejudice* of requiring industry participants to choose between totally redesigning their standard or paying royalties that Rambus impliedly assured them they would never have to pay.[69] This raises a valid question: If the Commission found a relationship between Rambus' misconduct and the DDR2 standard, as it did, why should the industry bear the burden of designing around Rambus's patents in DDR2? The Commission based its ruling on the fact that JEDEC members could have feasibly designed around Rambus's patented technologies when the DDR2 standard was adopted.[70] Of course, that finding is much different from a conclusion that JEDEC members would not have been prejudiced by being forced to design around those patents at that point in time.

Commissioner Harbour argued that the remedy should cover the DDR2 standard under the Commission's "fencing-in" authority to "require relief that prohibits otherwise lawful conduct, if such relief is necessary to prevent ongoing harm to competition."[71] When the SDRAM and DDR standards were adopted, it was feasible for JEDEC members to adopt alternative technologies that were neither more costly nor less efficient than those actually adopted.[72] It can be assumed that designing around Rambus's patents would have been virtually costless at those times. On the other hand, forcing the industry to design around those same patents years later is far from costless. First, the recoupment period on the time and money spent designing, developing, testing, optimizing and establishing the value of the standardized technologies would be truncated, and the experience gained in using those technologies would be lost. Second, a new round of otherwise unnecessary investment would have to be incurred to replace those technologies with others that offer no perceived advantages. The entire industry – DRAM manufacturers, OEMs and component makers – is arguably prejudiced if they must abandon tried, true and proven technologies and work to perfect unproven technologies that offer no potential efficiencies, particularly when they were led to believe that they would not ever be forced to choose between paying royalties to Rambus or having to design around Rambus's patents.[73]

Moreover, based on the facts found by the Commission in the Liability Decision – which, as noted above, laid the factual groundwork to conclude that JEDEC would have adopted a different technology in the "but for" world – it would arguably distort the standard setting process to require JEDEC to replace its tried, true and proven technologies with alternative, unproven technologies that offer no apparent cost or performance advantages. It seems flawed to impose such a requirement simply because a SSO member who spent years baiting a "pernicious"[74] trap for its fellow members finally decided to reveal its deception by springing that trap.

Conclusion

The Commission's liability decision condemns Rambus's conduct in no uncertain terms, and the Commission strongly asserted that it has "wide latitude for judgment in selecting a remedy"[75] – but the remedy imposed in this case was much narrower than the relief requested by Complaint Counsel because (1) it did not require royalty-free licensing and (2) it did not apply any remedy to DDR2, the most commercially relevant standard. Based on the Commission's unanimous findings of fact, there was significant support for the proposition that Rambus would have received no royalties in the "but for" world – and Rambus provided scant evidence to the contrary.

Despite the relatively minor economic effect of the Commission's remedy on Rambus's business, the Commission's commitment to this case – which has lasted five years – underscores its belief that effective enforcement and deterrence is crucial to encouraging participation in SSOs.[76] The fairly minimal financial impact of the remedy suggests that, this time, the Commission was primarily interested in providing guidance for the future conduct of SSOs. However, the high burden of proof assigned to Complaint Counsel on the scope and nature of the remedy in this case may make it difficult for the Commission to compel more severe remedies in future cases.

Of course, the Commission is not the only source of antitrust enforcement. Private litigants may take advantage of the Commission's findings and pursue an equitable estoppel theory in future private litigation that would bar Rambus from enforcing its SDRAM patents against those litigants with respect to the DDR2 standard. These private litigations may shed some more light on whether the Commission should have imposed a zero-royalty remedy and whether it should have extended that remedy to cover DDR2. Further, the FTC case is still not over – Rambus has indicated that it intends to appeal the Commission's decision. On March 16, 2007, the Commission stayed the enforcement of the maximum royalty rate provisions of the Final Order pending Rambus's appeal.[77]

Finally, the European Commission ("EC") has also entered the fray. On July 30, 2007, it issued a Statement of Objections challenging Rambus's conduct, alleging that Rambus engaged in "patent ambush" demanding unreasonably high royalty rates for patents fraudulently accepted as JEDEC standard. If it finds that Rambus violated Article 82 (which prohibits "abuse of a dominant position"), the EC could impose a fine of up to 10 percent of Rambus's global turnover for each year it broke the law. (And, as the EC's recent record €497 fine against Microsoft for unilateral conduct violations demonstrates, it is not afraid to invoke this power.) Alternatively, the EC could require Rambus to license its technology on RAND terms. The EC ostensibly brought its own action because the Commission's remedy does not cover royalties on non-US patents relating to goods that are not imported into or out of the United States,[78] but it will be interesting to see whether the relief sought by the EC extends farther than the Federal Trade Commission was willing to go.

1 Logan Breed is an attorney at Hogan & Hartson LLP.
2 *See, e g.*, *Rambus, Inc v Infineon Techs AG*, 330 F. Supp. 2d 679, 696 (E.D. Va. 2004) ("[F]ar from being anticompetitive or merely benign, SSOs generally have beneficial effects on competition.") (citing David A. Balto, "Standard Setting in the 21st Century Network Economy," 18 NO. 6 COMPUTER & INTERNET L. 5, 7 (2001)).
3 *See, e g.*, *Allied Tube & Conduit Corp v Indian Head, Inc.*, 486 U.S. 492, 500 (1988) ("Agreement on a product standard is, after all, implicitly an agreement not to manufacturer, distribute, or purchase certain types of products. Accordingly, private standard-setting associations have traditionally been objects of antitrust scrutiny."); *American Soc'y of Mech Eng'rs v Hydrolevel Corp.*, 456 U.S. 556, 571 (1982) ("[A] standard-setting organization ... can be rife with opportunities for anticompetitive activity.").
4 15 U.S.C. § 45(a)(2) (2006).
5 *See, e g.*, Susan Creighton, "Ranking Exclusionary Conduct," at 10 (Nov. 25, 2005), *available at* http://www.ftc.gov/speeches/creighton/051115conduct.pdf ("Looking for anticompetitive opportunism in standard-setting organizations … can yield significant bang for the enforcement buck.").
6 *In the Matter of Dell Computer Corp.*, 121 F.T.C. 616 (1996).
7 *In the Matter of Union Oil Co of Cal.*, F.T.C. Docket No. 9305.
8 JEDEC is the semiconductor engineering standardization body of the Electronic Industries Alliance ("EIA"), a trade association that represents all areas of the electronics industry. It has approximately 290 member companies, including both manufacturers and users of semiconductor components. *See* http://www.jedec.org/.
9 *In the Matter of Rambus, Inc.*, Docket No. 9302, Opinion of the Commission, 2006 WL 2330117 (F.T.C.), 2006-2 Trade Cases ¶ 75,364 at 4 ("Liability Decision").
10 *Id*
11 *In the Matter of Union Oil Co of Cal.*, Docket No. 9305, Decision and Order, 2005 WL 2003365 (F.T.C.) (Aug. 2, 2005). An FTC Administrative Law Judge ("ALJ") initially granted Unocal's motion to dismiss the complaint in its entirety on November 25, 2003. *In the Matter of Union Oil Co of Cal.*, Docket No. 9305, Initial Decision, 2003 WL 22977696 (F.T.C.) (Nov. 25, 2003). That ALJ held that *Noerr-Pennington* immunity applied to efforts, including alleged misrepresentations, to influence the standard setting functions of a governmental entity. Moreover, the ALJ ruled the FTC did not have jurisdiction over allegations that depend on the resolution of "substantial questions" of federal patent law. The Commission reviewed the ALJ's decision, disagreed on both points and reversed the Initial Decision on July 7, 2004. *In the Matter of Union Oil Co of Calif* , Docket No. 9305, Opinion of the Commission (July 7, 2004), *available at* http://www.ftc.gov/os/adjpro/d9305/index.htm. It refused to extend Noerr-Pennington protection to Unocal's alleged activity, and also held that the ALJ misinterpreted the scope of the FTC's jurisdiction, stating that "the ALJ and Unocal err through an unduly narrow reading of the FTC Act; an overly broad reading of the statute that confers patent law jurisdiction upon the federal courts; and a fundamental misinterpretation of the nature of the Commission's inquiry when patents are among the relevant assets of firms alleged to have unlawfully created or exercised monopoly power." *Id* at 42-43.
12 *In the Matter of Rambus, Inc.*, Docket No. 9302, 2006 WL 2330117 (F.T.C.) (Aug. 2, 2006).
13 *In the Matter of Rambus, Inc.*, Docket No. 9302, Opinion of the Commission on Remedy, 2007 WL 431524 (F.T.C.) (Feb. 5, 2007).

14 In the Matter of Rambus, Inc., Statement of Commissioner J. Thomas Rosch, Concurring in Part and Dissenting in Part, 2007 WL 431525 (F.T.C.) (Feb. 5, 2007) ("Rosch Concurring Opinion"); In the Matter of Rambus, Inc., Remedy Statement of Commissioner Pamela Jones Harbour Concurring in Part and Dissenting in Part, 2007 WL 431523 (F.T.C.) (Feb. 5, 2007) ("Harbour Concurring Opinion").
15 *Id* at 8.
16 *In the Matter of Rambus, Inc.*, Docket No. 9302, Administrative Complaint (June 18, 2002), *available at* http://www.ftc.gov/os/adjpro/d9302/020618admincmp.pdf ("Complaint").
17 Complaint ¶¶ 122-24.
18 *Id* ¶¶ 2, 70-78.
19 *Id* ¶¶ 70-78.
20 *In the Matter of Rambus, Inc.*, Docket No. 9302, Initial Decision, 2004 WL 390647 (F.T.C.) at 300-04 (Feb. 23, 2004) ("Initial Decision").
21 *See Id* at 295-300, 331-32.
22 *See Id* at 304-09.
23 *See Id* at 312-16.
24 *See Id* at 326-29.
25 Liability Decision at 5.
26 *Id* at 4.
27 *Id* at 37.
28 *Id* at 51.
29 *Id* at 66.
30 See, e.g., *Murray Space Shoe Corp v FTC*, 304 F.2d 270, 272 (2d Cir. 1962) (holding that, in the context of a deceptive advertising claim under Section 5, the FTC should assess the general impression the advertisement creates rather than engaging in a "hyper-technical" assessment of "the meaning of each word and phrase"); Federal Trade Commission Policy Statement on Deception, 4 Trade Reg. Rep (CCH) ¶ 13,205, at 20,911-12 (FTC Oct. 14, 1983).
31 *Id* at 78.
32 Rambus filed its first infringement suit against a producer of JEDEC-compliant DRAMs in early 2000, and JEDEC published the DDR2 standard to its members in 2002. *See Id* at 111.
33 *Id* at 113.
34 *Id* at 120.
35 In its filings and at oral argument on the remedy issue, Rambus argued that (1) the Commission was empowered only to seek prospective "cease and desist" orders, (2) Rambus's current royalty rates under the JEDEC standards were competitive and reasonable compared to its rates for other comparable licenses, and (3) therefore, the remedy should be limited to an order directing Rambus not to engage in deceptive conduct in future standard-setting. On the other hand, Complaint Counsel argued that the Commission should impose a compulsory, royalty-free license on all of Rambus's patents that had been incorporated into JEDEC standards because, had Rambus properly disclosed its patents, JEDEC would have approved a standard that did not infringe those patents or required a royalty-free license. Amici additionally argued that the Commission should consider the deterrence aspect of its remedy – if Rambus received a windfall (or any positive return) for its misconduct, future SSO participants would have an incentive to engage in similar conduct.
36 *In the Matter of Rambus, Inc.*, Docket No. 9302, Opinion of the Commission on Remedy, 2007 WL 431524 (F.T.C.) at (Feb. 5, 2007) ("Majority Remedy Opinion").
37 *Id* at 2. The Commission applied the legal standards of § 2 because FTC Act § 5 reaches conduct that violates the Sherman Act. *See*, *e g.*, *FTC v Cement Inst.*, 333 U.S. 683, 694-95 (1948); *Fashion Originators' Guild of America v FTC*, 312 U.S. 457, 463 (1941).
38 *Id* at 2, 6.
39 *Id* at 6.
40 "[W]here the circumstances justify such relief, the Commission has the authority to require royalty-free licensing." *Id* at 10 (quoting *American Cyanamid Co v FTC*, 63 F.T.C. 1747, n.46 (1963)).
41 Majority Remedy Opinion at 16.
42 *See*, *e g.*, *In the Matter of Rambus, Inc*, Docket No. 9302, Concurring Opinion of Commissioner Jon Leibowitz, 2006 WL 2330118 (F.T.C.) at 21 (Aug. 2, 2006) ("Rambus's abuse of JEDEC's standard-setting process was intentional, inappropriate, and injurious to competition and consumers alike.").
43 Liability Decision at 67, 44, 68.
44 *Id* at 26. This concept was also discussed in detail at oral argument. In particular, Complaint Counsel advocated that the Commission's "fencing in" authority under cases such as *FTC v National Lead*, 352 U.S. 419 (1957) was a separate theory under which the Commission could defensibly extend the remedy to include DDR2. *See* Oral Argument Relating to Remedy: Transcript of the Proceedings at 24-26, 85 (Nov. 15, 2006), *available at* http://www.ftc.gov/os/adjpro/d9302/061115remedyoralargumenttranscript.pdf.
45 *See supra* n.29 and accompanying text.
46 Liability Decision at 97.
47 *Id* at 82.
48 *Id* at 94.
49 See *id* at 71 ("The record establishes that the purpose *and effect* of Rambus's deceptive conduct was to manipulate the standard-setting process at JEDEC and gain market power.") (emphasis added).
50 *See* Rosch Concurring Opinion at 7.
51 See *id* at 5-6.
52 Majority Remedy Opinion at 13.
53 *Id* at 16.
54 See *id* at 10.
55 See Rosch Concurring Opinion at 2.
56 Majority Remedy Opinion at 12.
57 *Id* at 10.
58 *In the Matter of Rambus, Inc.*, Docket No. 9302, Reply Brief of Counsel Supporting the Complaint on the Issue of Remedy at 5 (Sept. 29, 2006) ("Complaint Counsel Remedy Reply Brief").
59 Majority Remedy Opinion at 12.
60 Commissioner Rosch's concurring opinion pointed out the strength of Complaint Counsel's position, stating that "JEDEC's rules, the expectations of its membership, and the market's concerns with costs generally and the cost of Rambus's technologies in particular all strongly support a finding that a fully informed JEDEC would have adopted standards that did not read on Rambus's patents." Rosch Concurring Opinion at 4.
61 Majority Remedy Opinion at 15-16.
62 Complaint Counsel Remedy Brief at 16-17 (quoting *Toys R Us v FTC*, 221 F.3d 928, 940 (7th Cir. 2000)); *see also ES Development, Inc v RWM Enterprises, Inc.*, 939 F.2d 547, 557 (8th Cir. 1991) (proper antitrust remedy should account for the "continuing effects of past illegal conduct") (citing *Wilk v American Medical Ass'n*, 671 F. Supp. 1465, 1485 (N.D. Ill. 1987); *In re Multidistrict Vehicle Air Pollution*, 538 F.2d 231, 236 (9th Cir. 1976).
63 *In the Matter of Rambus, Inc.*, Docket No. 9302, Brief of Counsel Supporting the Complaint on the Issue of Remedy, 2006 WL 2790237 (F.T.C.) at 18 (Sept. 18, 2006) ("Complaint Counsel Remedy Brief") (quoting *National Lead*, 352 U.S. at 425).
64 Majority Remedy Opinion at 30.
65 See Nicole Ridgway, "Investors Bid Up Rambus on FTC Royalty Ruling," Feb. 5, 2007, *available at* http://www.smartmoney.com/onedaywonder/index.cfm?story=20070205.
66 See Harbour Concurring Opinion at 9.
67 See *id*
68 Majority Remedy Opinion at 30.
69 See Harbour Concurring Opinion at 4 ("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.").
70 See Liability Decision at 113.
71 Harbour Concurring Opinion at 5.

72 See Liability Decision at 82, 94, 97.
73 As the Commission found, "JEDEC's members expected disclosure of both patents and patent applications that might be applicable to work JEDEC was undertaking, if the patents ever were going to be enforced against JEDEC compliant products." Liability Decision at 66 (emphasis added).
74 *Id* at 35.
75 Majority Remedy Opinion at 26 (quoting *Jacob Siegel Co v FTC*, 327 U.S. 608, 613 (1946)).
76 The Department of Justice Antitrust Division ("DOJ") has also provided important guidance to SSOs and their participants regarding patent disclosure requirements and the proper scope of *ex ante* patent licensing commitments in two recent business review letters. See Letter from Thomas O. Barnett, Assistant Attorney Gen., U.S. Dep't of Justice to Michael A. Lindsay, Dorsey & Whitney LLP (April 30, 2007) ("IEEE Business Review Letter"), *available at* http://www.usdoj.gov/atr/public/busreview/222978.htm; Letter from Thomas O. Barnett, Assistant Attorney Gen., U.S. Dep't of Justice to Robert A. Skitol, Drinker, Biddle & Reath, LLP (Oct. 30, 2006) ("VITA Business Review Letter"), *available at* http://www.usdoj.gov/atr/public/busreview/219380.htm.
77 *In the Matter of Rambus, Inc.*, Docket No. 9302, Order Granting in Part and Denying in Part Respondent's Motion for Stay of Final Order Pending Appeal, 2007 WL 901600 (F.T.C.) (March 16, 2007).
78 *See* European Commission, DG Competition, "Commission Confirms Sending a Statement of Objections to Rambus," Aug. 23, 2007, *available at* http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/07/330&format=HTML&aged=0&language=EN&guiLanguage=en.