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Vishesh Narayen

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**Is Patent Hold-up Anticompetitive?
Rambus and Individual Versus General Causal Claims**

Vishesh Narayen



Is Patent Hold-up Anticompetitive? *Rambus* and Individual Versus General Causal Claims

By Vishesh Narayan*

¶1 When patented technology is incorporated into a widely-adopted industry standard, the patentee can effectively “hold up” the industry because “patent owners who withhold information about their patents until after the standard has been adopted can command a higher royalty for those patents than they would have obtained had the patents been disclosed.”¹ In a few instances, patentees have been held liable for deceiving a standard-setting body by failing to disclose existing or pending patent applications.² However, in *Rambus, Inc. v. Federal Trade Commission*,³ the D.C. Circuit held that a patentee did not engage in exclusionary conduct under § 2 of the Sherman Act when it failed to disclose its patents to a standard-setting body, even though the standard-setting body subsequently incorporated the patented technology into its standard. The court essentially reasoned that since there was still a non-trivial possibility that the standard-setting body might have adopted the same standard even if the patents had been disclosed, non-disclosure did not constitute a harm to competition cognizable under § 2. What is plain from the court’s reasoning is that, in effect, it grafted a “but-for” causation requirement onto § 2, at least as applied to deception in standard-setting organizations. Such a requirement is an anomaly in § 2 jurisprudence. In reasoning as it did, the D.C. Circuit appeared to deviate from traditional principles applicable to § 2 monopolization claims—principles that the court itself recently reaffirmed in *United States v. Microsoft Corp.*⁴

¶2 In this Note, I explore and critically evaluate the court’s reasoning in a number of respects. In particular, I draw on literature on causation in tort law to identify a methodological error committed by the court—that of treating allegations of § 2 monopolization as individual causal claims rather than general ones. Not only is treating monopolization claims in this way inconsistent with antitrust law generally, but it is also problematic for two additional reasons. First, it puts plaintiffs in the impossible position of having to recreate the “but-for” world and prove that, absent the defendant’s allegedly exclusionary conduct, the outcome would have been different. Second, it encourages would-be monopolists to take earlier anticompetitive action and do so more often, particularly in cases, like *Rambus*, that involve what can be called “preemptive

* J.D. Candidate 2010, Northwestern University School of Law. Thank you to my family, whose enduring support I always appreciate but sometimes don’t acknowledge.

¹ 2 HERBERT HOVENKAMP ET AL., IP & ANTITRUST § 35.5, at 35-46 (Supp. 2008).

² See, e.g., *In re Dell Computer Corp.*, 121 F.T.C. 616 (1996) (Dell entering consent decree after failing to disclose patents related to VESA VL-bus design standard.).

³ 522 F.3d 456 (D.C. Cir. 2008), *petition for cert. filed*, 77 U.S.L.W. 3346 (U.S. Nov. 24, 2008) (No. 08-694).

⁴ 253 F.3d 34 (D.C. Cir. 2001).

causation.” Given the uncertainties attendant upon the standard-setting process, particularly in the realm of technology, it would be nearly impossible, under the approach adopted by the D.C. Circuit in *Rambus*, to make out a § 2 monopolization claim based on a patentee’s failure to disclose.

To reach this conclusion, Part I will discuss some general precepts of antitrust law, and the way in which standard-setting bodies are subject both to enhanced scrutiny and special solicitude under the antitrust laws. Part II summarizes the factual background and procedural history leading up to *Rambus*. In particular, because *Rambus* was an appeal from an FTC enforcement action, I describe in detail the conclusions reached by the Federal Trade Commission in that enforcement action. In Part III, I describe the reasoning and conclusion of the court in *Rambus*. In Part IV, I attempt to deconstruct the court’s reasoning, focusing in particular on the issue of causation. To unwind the causation analysis in *Rambus* I take advantage of two analytical tools. First, I compare *Rambus* to the reasoning and language in *Microsoft*,⁵ an earlier § 2 case also from the D.C. Circuit. Second, and more importantly, I draw on some of the causation literature from the tort context to clarify what proof the D.C. Circuit was demanding. I conclude that the D.C. Circuit in effect raised the standard of proof required for a plaintiff to succeed on a claim of anticompetitive conduct under § 2, at least within the context of patent hold-up.

I. INTRODUCTION

A. *Sherman Act, Section Two - Monopolization*

Section Two of the Sherman Act imposes liability on those who “monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations.”⁶ Over time, the Supreme Court has fashioned a two-part test for liability under § 2. First, the defendant must have monopoly power in the relevant market.⁷ Second, the defendant’s acquisition or continued maintenance of that monopoly power must be fairly traceable to some exclusionary or anticompetitive conduct.⁸ By way of example, a unilateral refusal to deal might be found exclusionary,⁹ as might predatory pricing.¹⁰

⁵ *Id.*

⁶ 15 U.S.C. § 2 (2006).

⁷ *United States v. Grinnell Corp.*, 384 U.S. 563, 570-71 (1966).

⁸ *Grinnell*, 384 U.S. at 570-71. The Court in *Grinnell* stated that [t]he offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.

Id.

⁹ *See Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985). *But see Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 409 (2004) (“*Aspen Skiing* is at or near the outer boundary of § 2 liability”) (emphasis in the original).

¹⁰ *See Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 222-24 (1993) (articulating in dicta a two-pronged test for predatory pricing claims). *But see Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227 (1st Cir. 1983) (rejecting claim of predatory pricing when prices were above marginal cost).

B. Standard-Setting Organizations

¶15 Section One of the Sherman Act prohibits “[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations.”¹¹ On their face, standard-setting organizations might appear to be a clear example of the “contract, combination, [or] conspiracy” prohibited by Sherman Act § 1—after all, “[a]greement on a product standard is . . . implicitly an agreement not to manufacture, distribute, or purchase certain types of products.”¹² However, the Supreme Court has long recognized that the Sherman Act “cannot mean what it says.”¹³ Instead, the Court has adopted a “rule of reason” under which the appropriate inquiry is “whether the challenged agreement is one that promotes competition or one that suppresses competition.”¹⁴ Although private standard-setting associations “have traditionally been objects of antitrust scrutiny,”¹⁵ they “can have significant procompetitive advantages”¹⁶ and are accordingly judged under a rule of reason.

II. BACKGROUND

A. Factual Background

¶16 Rambus, Inc. designs and licenses technology related to computer memory, commonly known as random access memory (“RAM”) and dynamic random access memory (“DRAM”). In the mid-1990s, Rambus was a member of the Joint Electron Device Engineering Council (“JEDEC”), a standard-setting organization comprised of designers and manufacturers of DRAM as well as producers of complementary products and systems. Specifically, between 1992 and 1996, Rambus was a member of working group JC 42.3, which was responsible for formulating and establishing standards for a new generation of DRAM known as synchronous dynamic RAM (“SDRAM”), including double data-rate SDRAM (“DDR SDRAM”). JEDEC had a policy, common among standard-setting organizations, requiring each member to disclose its existing or pending patents related to the technology being standardized.¹⁷ In June 1996, Rambus formally withdrew from JEDEC and in 1999, after SDRAM standards were promulgated by JC 42.3 and widely adopted in the DRAM industry, Rambus began to assert several of its patents against manufacturers of SDRAM.

¹¹ 15 U.S.C. § 1 (2006).

¹² *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 500 (1988).

¹³ *Nat’l Soc’y of Prof’l Eng’rs v. United States*, 435 U.S. 679, 687-88 (1978) (“[R]ead literally, § 1 would outlaw the entire body of private contract law.”).

¹⁴ *Id.* at 691.

¹⁵ *Allied Tube*, 486 U.S. at 500.

¹⁶ *Id.* at 501.

¹⁷ There has been dispute about what, precisely, JEDEC policies required. In related private litigation, the Federal Circuit noted (in oft-quoted language) that JEDEC’s patent disclosure policies suffered from a “staggering lack of defining details.” *Rambus, Inc. v. Infineon Techs. AG*, 318 F.3d 1081, 1102 (Fed. Cir. 2003). For further discussion, see Nicos L. Tsilas, *Toward Greater Clarity and Consistency in Patent Disclosure Policies in a Post-Rambus World*, 17 HARV. J.L. & TECH. 475 (2004).

B. Procedural History

¶7 On June 18, 2002, the Federal Trade Commission (“FTC”) filed a complaint charging that Rambus engaged in unfair competition and unfair or deceptive practices violating § 5(b) of the Federal Trade Commission Act (“FTC Act”), 15 U.S.C. § 45(b).¹⁸ Proceedings first began before an administrative law judge, who dismissed the complaint in its entirety.¹⁹ The FTC’s Complaint Counsel appealed that decision to the full Commission, which reopened the record and conducted plenary review.²⁰ After lengthy proceedings, the FTC issued a detailed opinion concluding that Rambus’s failure to disclose existing and pending patents and patent applications was exclusionary and anticompetitive conduct, violating both § 5 of the FTC Act and § 2 of the Sherman Act. The Commission issued a separate remedial opinion and order that compelled Rambus to license its relevant patents at reasonable royalty rates.²¹ Rambus appealed both the finding of liability and the determination of remedy to the D.C. Circuit. On April 22, 2008, the D.C. Circuit vacated the order of the Commission as to liability.²²

III. THE D.C. CIRCUIT’S DECISION IN *RAMBUS*

¶8 Regarding the first prong, the court began with the established principle that a monopolization claim under § 2 of the Sherman Act requires more than the mere existence of monopoly power (the first prong); it also requires “the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historical accident.”²³ To meet this second prong of the test, an antitrust plaintiff must demonstrate that a defendant has engaged in exclusionary or anticompetitive conduct that “reasonably appear[s] capable of making a significant contribution to . . . maintaining monopoly power.”²⁴ Rambus conceded that its patents gave it monopoly power in the relevant markets²⁵ (thus

¹⁸ Opinion of the Commission, *In re Rambus, Inc.*, Fed. Trade Comm’n, No. 9302, slip op. at 12-13 (Aug. 2, 2006), <http://www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf>.

¹⁹ *Id.* at 15; *Rambus, Inc. v. Fed. Trade Comm’n* (“*Rambus*”), 522 F.3d 456, 461 (D.C. Cir. 2008).

²⁰ *Rambus*, 522 F.3d at 461.

²¹ Opinion of the Commission on Remedy, *In re Rambus, Inc.*, Fed. Trade Comm’n No. 9302, slip op. at 12-13 (Feb. 5, 2007), <http://www.ftc.gov/os/adjpro/d9302/070205opinion.pdf>.

²² Following the decision of the D.C. Circuit, subsequent developments have occurred in the case. On June 6, 2008 the FTC petitioned the court for rehearing en-banc. Petition of Respondent FTC for Rehearing En Banc, *Rambus, Inc. v. Fed. Trade Comm’n*, 522 F.3d 456 (D.C. Cir. 2008) (Nos. 07-1086, 07-1124). In addition, on November 24, 2008 the FTC filed a petition for certiorari with the Supreme Court. Petition for Writ of Certiorari, *Fed. Trade Comm’n v. Rambus, Inc.*, No. 08-694 (U.S. Nov. 24, 2008). The petition for rehearing en banc was denied, and the petitioner for certiorari was denied. See Supreme Court of the United States, Docket for 08-694, <http://origin.www.supremecourtus.gov/docket/08-694.htm> (last visited Apr. 15, 2010).

²³ *Rambus*, 522 F.3d at 463 (quoting *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004)) (internal quotes omitted).

²⁴ 3 PHILIP AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 650(c) (1996); see also *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 605 n.32 (1985).

²⁵ *Rambus*, 522 F.3d at 463; see Opinion of the Commission, *In re Rambus, Inc.*, Fed. Trade Comm’n, No. 9302, slip op. at 72 (Aug. 2, 2006), <http://www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf> (“[T]he alleged relevant product markets involve technologies that are incorporated in DRAM for use in current and recent-generation electronic memory devices. The four allegedly relevant technology markets are: (1) the latency technology market; (2) the burst length technology market; (3) the data acceleration technology market; and (4) the clock synchronization technology market.”).

satisfying the first part of the monopolization inquiry) so the court addressed only the second element of monopolization. The key question, as framed by the court, was “whether Rambus engaged in exclusionary conduct, and thereby acquired its monopoly power in the relevant markets unlawfully.”²⁶ The court turned to the findings of the Commission, which held that Rambus engaged in exclusionary conduct consisting of “misrepresentation, omissions, and other practices that deceived JEDEC about the nature and scope of its patent interests while the organization standardized technologies covered by those interests.”²⁷ The Commission also concluded that if Rambus *had* disclosed the nature and scope of its patent interests, “JEDEC either would have excluded Rambus’s patented technologies . . . *or* would have demanded [reasonable and non-discriminatory license] assurances, with an opportunity for *ex ante* licensing negotiations.”²⁸

¶9 The court then considered, at length, each of these two possible consequences described by the Commission. First, JEDEC might altogether have excluded Rambus’s patented technologies in the SDRAM and DDR SDRAM standards had it known the scope and nature of Rambus’s patent interests. The court assumed (without deciding) that if this were true, then Rambus’s nondisclosure was anticompetitive. Second, rather than excluding Rambus’s patented technology altogether, the JEDEC might have adopted the same SDRAM standards but demanded so-called “RAND” assurances (assurance of reasonable and non-discriminatory license terms). After surveying recent antitrust cases and treatises, the court concluded that “JEDEC’s loss of an opportunity to seek favorable licensing terms is not as such an antitrust harm.”²⁹ The court reasoned that “[d]eceptive conduct—like any other kind—must have an anticompetitive effect in order to form the basis of a monopolization claim,”³⁰ concluding that, because the second of the two possibilities envisioned by the Commission was not anticompetitive, the Commission failed to “carr[y] its burden of proving that Rambus’s conduct had an anticompetitive effect.”³¹ In reaching its conclusion, the court noted that “the Commission made clear in its remedial opinion that there was insufficient evidence that the JEDEC would have standardized other technologies had it known the full scope of Rambus’s intellectual property.”³² In a pivotal paragraph, the court evaluated the two possible paths that the JEDEC could have taken:

Here, the Commission expressly left open the likelihood that JEDEC would have standardized Rambus’s technologies *even if Rambus had disclosed* its intellectual property. Under this hypothesis, JEDEC lost only an opportunity to secure a RAND commitment from Rambus. But loss of such a commitment is not a harm to competition³³

²⁶ *Rambus*, 522 F.3d at 463.

²⁷ *Id.*

²⁸ *Id.* (emphasis added).

²⁹ *Id.* at 464-67 (comparing to *NYNEX Corp. v. Discon, Inc.*, 525 U.S. 128 (1998)).

³⁰ *Rambus*, 522 F.3d at 464.

³¹ *Id.*

³² *Id.*

³³ *Id.* at 466 (emphasis in the original).

The court's decision in *Rambus* seems to rely on a syllogism. First, if Rambus's deception merely enabled it to secure higher royalties, that deception is "beyond the antitrust laws' reach"³⁴ because "an otherwise lawful monopolist's use of deception simply to obtain higher prices normally has no particular tendency to exclude rivals and thus to diminish competition."³⁵ Second, if either of the two possible consequences of Rambus's deception was "beyond the antitrust laws' reach," then Rambus's deception did not constitute exclusionary conduct.

¶10 Avoidance of the first of the two possible outcomes anticipated by the Commission—that JEDEC would *not* have adopted a standard that incorporated Rambus proprietary technology if Rambus disclosed its intellectual property—was clearly anticompetitive (even if it was not the only possible outcome). Indeed, the court assumed, without deciding, that avoiding this outcome was anticompetitive. However, in the court's view, avoidance of the second of the two possible outcomes—that JEDEC would have adopted the same standard but sought RAND assurances—was not anticompetitive.

¶11 In essence, the court concluded that if JEDEC would have adopted the same standard even if Rambus disclosed its patent interests, then Rambus's nondisclosure had no anticompetitive effect. JEDEC would have done what is common under these circumstances: it would have required assurance from Rambus that it would license its patents on reasonable and non-discriminatory ("RAND") terms. Had JEDEC sought RAND assurances prior to promulgating a standard, it would have had the opportunity for *ex ante* licensing negotiations. In fact, the court implicitly assumed Rambus would have agreed in such *ex ante* negotiations to license its patents on reasonable and non-discriminatory terms.

IV. DECONSTRUCTING *RAMBUS*

¶12 In this section, I attempt to deconstruct, clarify, and evaluate the reasoning of the court in *Rambus* on a number of points. First, I address the court's conclusion that "an otherwise lawful monopolist's use of deception simply to obtain higher prices . . . has no particular tendency to exclude rivals and thus to diminish competition."³⁶ In particular, I challenge whether this premise is as uncontroversial as the court believes. Second, I address what I view as a serious failure by the court to distinguish between the quantum of proof necessary to establish liability, and the quantum necessary to justify a particular remedy. I do this first by comparing the case with *Microsoft*,³⁷ an earlier § 2 case also decided by the D.C. Circuit. Because the issues faced and arguments made in *Microsoft* bear striking similarities to those in *Rambus*, that case and its reasoning deserve close scrutiny. Third, and most importantly, by drawing on causation literature in the tort context, I hope to further clarify what, precisely, the court found lacking in the Commission's case against Rambus.

³⁴ *Id.* at 464.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *United States v. Microsoft, Corp.*, 253 F.3d 34 (D.C. Cir. 2001).

A. Overcharge as Competitive Harm

¶13 Crucial to the court’s reasoning in *Rambus* was its conclusion that the use of deception to obtain higher prices “normally has no particular tendency to exclude rivals and thus diminish competition.”³⁸ However, this proposition is far from uncontroverted. The hallmark of exclusionary conduct is behavior (other than competition on the merits) that allows a monopolist to charge supracompetitive prices. In this case, the increased royalties enabled by Rambus’s deception are, without a doubt, supracompetitive since if Rambus *did* disclose its patents, then the best that Rambus could have hoped for were *reasonable* royalties (the “RAND” assurances that JEDEC would have demanded before adopting standards that incorporated patented technology). Furthermore, deception in the face of a duty to disclose can in no way be characterized as “competition on the merits.” Thus, even the modest increase in royalties obtainable (and, in fact, obtained) as a result of Rambus’s deception can properly be characterized as an anticompetitive harm. Of course, it is well understood that “the opportunity to charge monopoly prices—at least for a short period—is what attracts ‘business acumen’ in the first place; it induces risk taking that produces innovation and economic growth.”³⁹ But a monopolist accused of violating § 2 can only escape liability by demonstrating that the acquisition, or continued maintenance, of monopoly power was the result of competition *on the merits*. Indeed, as one notable authority puts it: “nondisclosure [of patents to an SSO] may still be shown to harm competition if it affects the terms under which the patents are licensed.”⁴⁰ More specifically “[i]f an antitrust plaintiff can show that the patent owner would have licensed the patent at a competitive rate had it been forced to disclose the patent . . . but charged a higher rate because of the nondisclosure . . . that overcharge can properly constitute competitive harm attributable to the nondisclosure.”⁴¹ There is at least some reason, therefore, to think that an overcharge of patent royalties can constitute a competitive harm under the antitrust laws.⁴²

B. Shifting Standards

¶14 I turn now to a slightly more serious error by the court: the failure to recognize the difference between burdens of proof for finding liability and burdens of proof for justifying particular remedies. Simply put, the court unduly relied on language from the Commission’s remedial opinion, in which the Commission concluded that the evidence was insufficient to warrant imposing royalty-free licensing as a remedy for Rambus’s exclusionary conduct.

¶15 In its opinion, the D.C. Circuit noted that “the Commission made clear in its remedial opinion that there was insufficient evidence that JEDEC would have standardized other technologies had it known the full scope of Rambus’s intellectual

³⁸ *Rambus*, 522 F.3d at 464.

³⁹ *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004).

⁴⁰ 2 HERBERT HOVENKAMP ET AL., *IP & ANTITRUST* § 35.5 at 35-46 (Supp. 2008).

⁴¹ *Id.* at 35-46.

⁴² It is also worth noting that between the FTC enforcement action and the D.C. Circuit’s decision, Professor Hovenkamp specifically discussed the FTC’s proceeding against Rambus, noting that “[i]n a detailed and thoughtful opinion” this was “the [same] conclusion [reached] in the FTC’s *Rambus* decision . . .” *Id.* at 35-47 n.22.5. Professor Hovenkamp went on to say that “[a]ssuming the facts the FTC found were correct, we think it is well-supported as a matter of law.” *Id.*

property.”⁴³ Building on this (and similar concessions from the Commission during oral argument), the court went on to conclude that there was an insufficient basis for finding liability. However, the Commission, in its remedial opinion, concluded only that imposing royalty-free licensing on Rambus was unwarranted because there was insufficient evidence that such a remedy “[was] necessary to restore the competition that would have existed in the ‘but for’ world—*i.e.*, [absent] Rambus’s deception.”⁴⁴ The insufficiency of proof went only to the decision of whether to impose a drastic remedy like royalty-free licensing, not to the existence of liability. The remedy of royalty-free licensing, the Commission concluded, would have required more conclusive proof that JEDEC would have discarded Rambus’s proprietary technology.⁴⁵ Implicit in the Commission’s reasoning is the idea that one standard of proof could be used to determine liability, and another more demanding standard could be used to determine the appropriate remedy.⁴⁶ In *Microsoft* (described in more detail below), Microsoft made a similar argument that the evidence of causation (linking its conduct to the anticompetitive outcome) was insufficient. The court’s response in that case is highly instructive:

Microsoft’s concerns over causation have more purchase in connection with the appropriate remedy issue, *i.e.*, whether the court should impose a structural remedy or merely enjoin the offensive conduct at issue. As we point out later in this opinion, divestiture is a remedy that is imposed only with great caution Absent some measure of confidence that there has been an actual loss to competition that needs to be restored, wisdom counsels against adopting a radical structural relief. *See* 3 Areeda & Hovenkamp, *Antitrust Law* ¶ 653b, at 91-92 (“[M]ore extensive equitable relief, particularly remedies such as divestiture designed to eliminate the monopoly altogether, raise more serious questions and require a clearer indication of a significant causal connection between the conduct and creation or maintenance of the market power.”). *But these queries go to questions of remedy, not liability.*⁴⁷

Like the structural remedy of divestiture in *Microsoft*, royalty-free licensing was recognized by the Commission as a remedy to be imposed on Rambus only if such a remedy “is necessary to restore the competition that would have existed in the ‘but for’ world.”⁴⁸ The court in *Microsoft*, like the Commission in *Rambus*, properly separated the issue of liability from remedy, and was – in characteristic antitrust fashion – reluctant to impose a remedy that was “designed to eliminate the monopoly altogether”⁴⁹ without greater confidence that “there has been an actual loss to competition that needs to be

⁴³ *Rambus*, 522 F.3d at 464.

⁴⁴ Opinion of the Commission on Remedy, *In re Rambus, Inc.*, Fed. Trade Comm’n No. 9302, slip op. at 12 (Feb. 5, 2007), <http://www.ftc.gov/os/adjpro/d9302/070205opinion.pdf>.

⁴⁵ *Id.* (“We have examined the record for the proof that the courts have found necessary to impose royalty-free licensing, but do not find it.”).

⁴⁶ *Id.* (“We conclude . . . that a royalty-free remedy is [not] necessary to restore the competition that would have existed in the ‘but for’ world.”).

⁴⁷ *United States v. Microsoft Corp.*, 253 F.3d 34, 80 (D.C. Cir. 2001) (emphasis added).

⁴⁸ Opinion of the Commission on Remedy, *In re Rambus, Inc.*, Fed. Trade Comm’n No. 9302, slip op. at 12 (Feb. 5, 2007), <http://www.ftc.gov/os/adjpro/d9302/070205opinion.pdf>.

⁴⁹ AREEDA & HOVENKAMP, *supra* note 24, at ¶ 653b.

restored.”⁵⁰ It was in this similar vein that the Commission in *Rambus* concluded that “[plaintiffs] have not satisfied their burden of demonstrating that a royalty-free remedy [was] necessary to restore the competition that would have existed in the ‘but for’ world.”⁵¹ To be sure, the court in *Rambus* did recognize that the Commission applied a more demanding standard of proof in deciding upon a remedy than in deciding liability:

After additional briefing by the parties . . . the Commission rendered a separate remedial opinion and final order. [Citations.] It held that it had the authority in principle to order compulsory [royalty-free] licensing but that remedies beyond injunctions against future anticompetitive conduct would require stronger proof that they were necessary to restore competitive conditions. [Citation.] Applying that more demanding burden . . . the Commission refused to compel Rambus to license its relevant patents royalty-free⁵²

Nevertheless, the court appeared to take the Commission’s concessions out of the *remedy* context and use them in assessing *liability*.

C. The Prescient Opinion: Microsoft

¶16 In *United States v. Microsoft Corp.*,⁵³ the United States and a group of state plaintiffs asserted that Microsoft’s efforts to maintain its monopoly in the market for Intel-compatible PC operating systems violated § 2 of the Sherman Act.⁵⁴ At issue were Microsoft’s efforts to “suppress Netscape Navigator’s threat to its operating system monopoly.”⁵⁵ The district court considered a variety of allegedly exclusionary behavior by Microsoft, including the integration of the Internet Explorer web browser into its Windows operating system,⁵⁶ agreements it made with internet access providers,⁵⁷ and its dealings with internet content providers, independent software vendors and even Apple Computer.⁵⁸ The allegedly exclusionary behavior most relevant here was Microsoft’s response to Java, a set of technologies developed by Sun Microsystems that enable cross-platform development and execution of software.⁵⁹ At the time, Java “pos[ed] a potential threat to Windows’ position as the ubiquitous platform for software development”⁶⁰ because if software is platform-agnostic (i.e., can run on any operating system),

⁵⁰ *Microsoft*, 253 F.3d at 80.

⁵¹ Opinion of the Commission on Remedy, *In re Rambus, Inc.*, Fed. Trade Comm’n No. 9302, slip op. at 7 (Feb. 5, 2007), <http://www.ftc.gov/os/adjpro/d9302/070205opinion.pdf>.

⁵² *Rambus, Inc. v. Fed. Trade Comm’n*, 522 F.3d 456, 461-62 (D.C. Cir. 2008).

⁵³ Only the D.C. Circuit opinion is cited here because it appropriately summarizes both the liability opinion of the district court, 87 F.Supp.2d 30, and the remedial order, 97 F.Supp.2d 59.

⁵⁴ *Microsoft*, 253 F.3d at 47.

⁵⁵ *Id.* at 50.

⁵⁶ *Id.* at 64-65.

⁵⁷ *Id.* at 67.

⁵⁸ *Id.* at 71.

⁵⁹ *Id.* at 74 (“The Java technologies include: (1) a programming language; (2) a set of programs written in that language, called the ‘Java class libraries,’ which expose APIs; (3) a compiler, which translate code written by a developer into ‘bytecode’; and (4) a Java Virtual Machine (‘JVM’) which translates bytecode into instructions to the operating system.”).

⁶⁰ *Id.*

consumers are no longer locked into the platform on which their software is designed to run.

¶17 The district court first concluded that Microsoft possessed monopoly power in the relevant market. Then, applying the test for monopolization, first established in *United States v. Grinnell Corp.*,⁶¹ the district court found that Microsoft “maintained its power not through competition on the merits, but through unlawful means.”⁶² On appeal, the D.C. Circuit agreed.⁶³ Specifically, the court found that Microsoft took the following four steps to “exclude Java from developing as a viable cross-platform [middleware] threat.”⁶⁴

¶18 First, Microsoft developed its own proprietary implementation of the Java language and Java Virtual Machine (“JVM”), both of which were incompatible with those of Sun Microsystems. The Court of Appeals held that this incompatibility was “no violation, to be sure”⁶⁵ because “a monopolist does not violate the antitrust laws simply by developing a product that is incompatible with those of its rivals.”⁶⁶

¶19 Second, Microsoft entered into agreements with dozens of independent software vendors to use Microsoft’s proprietary implementation of Java.⁶⁷ The Court of Appeals affirmed the district court’s finding that these agreements were anti-competitive.

¶20 Third, and most relevant here, Microsoft “deceived Java developers regarding the Windows-specific nature of [its Java software development] tools.”⁶⁸ Microsoft, as part of its proprietary implementation of Java, created a number of software development tools that would assist independent software vendors in designing Java applications. These tools, however, included certain “keywords” and “compiler directives” that could only properly be executed by Microsoft’s version of the Java runtime environment (which was only available on Windows). As a result, Java developers could, and did, “unwittingly [write] Java applications that ran only on Windows.”⁶⁹ In other words, developers who “used Microsoft’s tools to develop what Microsoft led them to believe were cross-platform applications ended up producing applications that would run only on the Windows operating system.”⁷⁰ The Court of Appeals affirmed the district court’s conclusion that this aspect of Microsoft’s conduct was exclusionary, reasoning that

Microsoft’s conduct related to its Java developer tools served to protect its monopoly of the operating system in a manner not attributable either to the superiority of the operating system or to the acumen of its makers, and therefore was anticompetitive. Unsurprisingly, Microsoft offers no procompetitive

⁶¹ 384 U.S. 563, 570-71 (1966).

⁶² *Microsoft*, 253 F.3d at 50.

⁶³ *Id.* at 51.

⁶⁴ *Id.* at 74.

⁶⁵ *Id.* at 76.

⁶⁶ *Microsoft*, 253 F.3d at 75.

⁶⁷ *Id.*

⁶⁸ *Id.* at 76.

⁶⁹ *Id.* (quoting the district court’s conclusions of law).

⁷⁰ *Microsoft*, 253 F.3d at 76.

explanation for its campaign to deceive developers. Accordingly, we conclude this conduct is exclusionary, in violation of § 2 of the Sherman Act.⁷¹

¶21 Microsoft, on appeal, urged the court to reverse the finding of § 2 liability, arguing that plaintiffs never established a causal link between Microsoft’s anticompetitive conduct and the continued maintenance of its monopoly power. That argument, which the *Microsoft* court rejected, is instructive because it parallels in sum and substance the argument urged and accepted in *Rambus*. In *Microsoft*, the court rejected the lack-of-causation defense, stating that:

Microsoft points to no case, and we can find none, standing for the proposition that, as to § 2 liability in an equitable enforcement action, plaintiffs must present direct proof that a defendant’s continued monopoly power is precisely attributable to its anticompetitive conduct. As its lone authority, Microsoft cites the following passage from Professor Areeda’s antitrust treatise: ‘The plaintiff has the burden of pleading, introducing evidence, and presumably proving by a preponderance of the evidence that reprehensible behavior has contributed significantly to the . . . maintenance of monopoly.’

But, with respect to actions seeking injunctive relief, the authors of that treatise also recognize the need for courts to infer ‘causation’ from the fact that a defendant has engaged in anticompetitive conduct that ‘reasonably appears capable of making a significant contribution to . . . maintaining monopoly power.’ *To require that § 2 liability turn on a plaintiff’s ability or inability to reconstruct the hypothetical marketplace absent a defendant’s anticompetitive conduct would only encourage monopolists to take more and earlier anticompetitive action.*⁷²

¶22 Given the court’s thorough reasoning, little could be said that would not be redundant. But it is worth highlighting two important considerations that implicitly underlie this passage from *Microsoft*. First, it would be unfair to put plaintiffs in the position of having to “reconstruct the hypothetical marketplace absent a defendant’s anticompetitive conduct.”⁷³ Second, § 2 of the Sherman Act—at least in equitable enforcement actions (as contrasted with claims seeking monetary damages)—does not demand proof of a causal connection in that particular instance, but is instead concerned with whether the conduct alleged to be exclusionary has, in general, anticompetitive effects. In the next section, I explore the conceptual difference between the two, drawing on literature from the tort context.

D. Causation Deconstructed

¶23 I now consider the causation issue in *Rambus* (and that present in § 2 cases generally) from an entirely conceptual point of view. To begin with, it is helpful to distinguish between what scholars have called “individual causal claims” and “general

⁷¹ *Id.* at 77.

⁷² *Id.* at 79 (some emphasis added).

⁷³ *Id.*

causal claims.”⁷⁴ Individualized causal claims (also known as “cause-in-fact” claims) are assertions that “one particular event or condition was the cause of another particular event or condition.”⁷⁵ To draw on an example from the literature:

[I]f John Smith contracts liver cancer, a court might seek to establish whether or not his exposure to TCE [trichloroethylene] in a factory that employed him for ten years was the “proximate cause” of his particular cancer. In such cases, by saying that exposure to TCE caused the disease, courts typically ask whether the cancer would not have occurred “but for” the exposure to TCE.⁷⁶

This is an example of an individual level causal claim – one whose truth depends on the outcome of the particular counterfactual: what would have happened to John Smith had he not been exposed to TCE?⁷⁷

¶24 In contrast, general causal claims refer to classes of outcomes and concern the “probability [of an outcome] or average severity of a property”⁷⁸ that results from the initial event or conduct. Returning to the TCE example, a general causal claim about the connection between TCE and liver cancer would be: “in a population of factory workers who were exposed to TCE, the probability of getting liver cancer (the risk among the exposed) is higher than it would have been in the same population had they not been exposed to TCE.”⁷⁹ Unlike an individual causal claim, the truth of a general causal claim does not depend on the truth or outcome of any *particular* counterfactual. Indeed, the outcome of any particular counterfactual is mostly irrelevant (except to the extent that it can help assess aggregate probabilities). Turning back to the earlier example, a claim that TCE causes liver cancer in a population of workers “does not entail that every worker who was exposed to TCE will develop liver cancer,”⁸⁰ nor does it entail that “every case of liver cancer among the workers would not have happened but for TCE exposure.”⁸¹ Rather, the truth of the general causal claim depends on the truth of a more *general* counterfactual: “had the same population lived the same life, with the exception of not being exposed to TCE, then the probability [and thus prevalence] of liver cancer would have been lower than it was in the actual world.”⁸² There are, of course, difficulties that arise in evaluating the truth of general causal claims, just as there are difficulties in evaluating the truth of individual causal claims.⁸³ But the key difference is the level of generality at which the counter-factual hypothesis is evaluated.

¶25 Given this framework, I turn now to the key questions I hope to answer in the rest of this Note. First, did the D.C. Circuit treat allegations of § 2 monopolization in *Rambus* as making an individual causal claim or a general causal claim? Second, does antitrust

⁷⁴ See also Richard Scheines, *Causation, Truth, and the Law*, 73 BROOK. L. REV. 959 (2008); see generally David Lewis, *Causation*, 70 J. PHIL. 556 (1973).

⁷⁵ Scheines, *supra* note 74, at 960.

⁷⁶ *Id.*

⁷⁷ *Id.* at 960-61.

⁷⁸ *Id.* at 961.

⁷⁹ Scheines, *supra* note 74, at 761.

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

⁸³ Scheines, *supra* note 74, at 962 (“Two objections arise immediately: the vagueness and objectivity of counterfactual possible worlds, and the meaning of probability.”).

law treat allegations of Sherman Act violations as individual or causal claims? Third, are the effects of patent hold-up severe enough that one could make a general causal claim that such conduct is anticompetitive?

¶26 *Microsoft* provides a good illustration of the difference, in the antitrust context, between individual and general causal claims. *Microsoft* argued that the government “never established a causal link between *Microsoft*’s anticompetitive conduct . . . and the maintenance of [its] operating system monopoly.”⁸⁴ In support of its argument, *Microsoft* pointed to the district court’s finding of fact that “[t]here [was] insufficient evidence to find that, absent *Microsoft*’s actions, Navigator and Java . . . would have ignited genuine competition in the market for Intel-compatible PC operating systems.”⁸⁵ In other words, *Microsoft* challenged liability on the basis that the outcome in the specific counterfactual – what would the market for Intel-compatible PC operating systems have looked like absent *Microsoft*’s allegedly exclusionary conduct? – would have been the same. In response to this argument, the court stated that:

[T]he question in this case is not whether Java or Navigator would *actually* have developed into viable platform substitutes, but . . . whether as *a general matter* the exclusion of nascent threats is the type of conduct that is reasonably capable of contributing significantly to a defendant’s continued monopoly power⁸⁶

In *Microsoft*, the court essentially rejected the relevance of the specific counterfactual.

¶27 A further problem, implicitly recognized by the D.C. Circuit, is that *Rambus* posed what some scholars have called “overdetermined-causation cases” – “cases in which two or more factors each would have been sufficient to produce the [outcome], so that none of them was a necessary condition.”⁸⁷ Specifically, *Rambus* represents “preemptive causation” – a situation where “a factor other than the specified act would have been sufficient to produce the [outcome] in the absence of the specified act, but its effects . . . were preempted by the more immediately operative effects of the specified act.”⁸⁸ To illustrate, consider that *Rambus*’s lack-of-causation defense boils down to something like this: our technology was superior and JEDEC would have incorporated it even if we had disclosed our patent interests. Assuming we accept the premise that *Rambus* had superior technology, the operative effect of *Rambus*’s superior technology was JEDEC’s incorporation of that technology into the SDRAM standard. However, by keeping secret its patent interests, *Rambus* intervened in the causal chain, altering the standard-setting calculus, and ensuring to a virtual certainty that JEDEC adopted its standard. Thus, *Rambus*’s non-disclosure of its patent interests preempted the operative effects of its arguably superior technology. In a narrow sense, then, *Rambus*’s deception was not a necessary condition to the outcome (JEDEC’s selection of standards incorporated *Rambus*’s patented technology), because ultimately the superiority of *Rambus*’s technology may have won out anyway. This reasoning should sound intuitive to any student of tort law because it is the familiar requirement of strict but-for causation.

⁸⁴ *Microsoft*, 253 F.3d 34 at 78.

⁸⁵ *Id.* (quoting district court’s finding of fact).

⁸⁶ *Id.* at 79.

⁸⁷ Richard W. Wright, *Causation in Tort Law*, 73 CAL. L. REV. 1735, 1740 (1985).

⁸⁸ *Id.* at 1775.

¶28 If, however, Rambus’s technology would not have “won out” in the JEDEC standards-selection process standing on its own, then there is no preemptive causation because there was no other factor sufficient to produce the same outcome in the absence of Rambus’s deceptive conduct. In that situation, Rambus’s conduct could clearly and uncontroversially be identified as a necessary condition for the anti-competitive outcome.

¶29 What the foregoing discussion illustrates, I think, is that while clothed in a discussion of principles of antitrust law, the D.C. Circuit was at bottom grasping to find some causal link between Rambus’s deception and JEDEC’s subsequent incorporation of Rambus technology in the SDRAM standard. But by importing the notion of but-for causation into the § 2 context, the court departed substantially from the settled standard for a monopolization claim – a standard that has, at least implicitly, demanded far less than what is required in the tort context. In one treatise, Professors Areeda and Hovenkamp have in fact compared the “strict” causal proof required in tort cases with the relatively modest causation required in antitrust cases:

Notwithstanding the compelling arguments for requiring a clear showing of causation, the required proof is not “strict,” as in the classical tort sense. In early twentieth century tort cases plaintiffs were denied recovery because they could not provide clear evidence of what would have happened had the defendant not acted improperly. [Citation to 1920’s tort case.] Many exclusionary practices, just like many negligence torts, are one-of-a-kind situations in which it is impossible to prove that an outcome would have been different absent the violation. For example, in most cases a plaintiff cannot prove that without the defendant’s anticompetitive destruction of its rival the market would have been more competitive. Once the challenged events have occurred, the alternative reality can never be recreated.

For this reason the government [plaintiff] need not show that competition is in fact less than it would be in some alternate universe in which the challenged conduct had not occurred. It is enough to show that anticompetitive consequences are a naturally-to-be-expected outcome of the challenged conduct.⁸⁹

There is still an unsettled question in § 2 jurisprudence: how strong must proof of causation be to succeed on a monopolization claim? One possibility is that the burden might be placed on the plaintiff to prove that, in that particular case, it is more likely than not that the defendant’s exclusionary conduct in fact impaired competition. This appears to be the operative rule adopted by the *Rambus* court. The other possibility is that the plaintiff’s burden might merely be to prove that, in general, it is more likely than not that exclusionary conduct of the sort engaged in by the defendant impairs competition. As noted earlier, this seemed to be the operative rule in *Microsoft*.⁹⁰ The difference between the two is the difference between individual and general level causal claims.⁹¹ The

⁸⁹ AREEDA & HOVENKAMP, *supra* note 24, at ¶ 657a2.

⁹⁰ *Microsoft*, 253 F.3d at 79 (“Given this rather edentulous test for causation, the question in this case is not whether Java or Navigator would *actually* have developed into viable platform substitutes, but . . . whether *as a general matter* the exclusion of nascent threats is the type of conduct that is reasonably capable of contributing significantly to a defendant’s continued monopoly power . . .”) (emphasis added).

⁹¹ See Scheines, *supra* note 74, at 960.

question, unsettled in § 2 jurisprudence, is whether allegations of exclusionary conduct should be treated as individual causal claims or general causal claims. If treated as individual causal claims, the plaintiff is put in the unenviable position of trying to re-create the “but for” world. That is, the plaintiff must somehow refute (to the court’s satisfaction) the counterfactual statement, “the outcome would have been the same absent the defendant’s acts.” The problem of this approach, recognized not only in early antitrust cases,⁹² but also by scholars⁹³ and even the D.C. Circuit itself,⁹⁴ is that the plaintiff will almost never be able to prove what would have happened but for the allegedly exclusionary conduct.

E. General Approach of Antitrust Law

¶30

Finally, I turn now to what type of approach generally seems to be the one most favored by antitrust law. I conclude that the general approach of antitrust law has been to require only that anticompetitive consequences are *likely* to flow from conduct, not that they are certain to flow from such conduct. Case law is replete with examples evidencing such an approach. In *Standard Oil Co. of Cal. v. United States*,⁹⁵ for instance, the Supreme Court dealt for the first time with exclusive dealing arrangements.⁹⁶ In declining to require “some sort of showing as to the actual or probable economic consequences”⁹⁷ of exclusive dealing arrangements, the Court reasoned that

. . . to demand that bare inference be supported by evidence as to what would have happened but for the adoption of the practice that was in fact adopted . . . would be a standard of proof if not virtually impossible to meet, at least most ill-suited for ascertainment by courts.⁹⁸

This is not to say that causation is never a problem in antitrust law. In *Barry Wright Corp. v. Grinnell Corp.*⁹⁹ it was argued that penalty-like “noncancellation” clauses in a requirements contract were exclusionary because they might “discourage a buyer from . . . breach[ing] the purchase agreement, [paying] damages, and [buying] from a new entrant instead.”¹⁰⁰ The First Circuit, holding that the “noncancellation” clauses were not exclusionary, found it “virtually impossible to believe that the presence of th[ese]

⁹² See *Standard Oil Co. of Cal. v. United States*, 337 U.S. 293, 309-10 (1949) (“[T]o demand that bare inference be supported by evidence as to what would have happened but for the adoption of the practice that was in fact adopted . . . would be a standard of proof if not virtually impossible to meet, at least most ill-suited for ascertainment by courts.”).

⁹³ AREEDA & HOVENKAMP, *supra* note 24, at ¶ 651c (“[T]he defendant is made to suffer the uncertain consequences of its own undesirable conduct.”).

⁹⁴ *Microsoft*, 253 F.3d 34 at 79 (“To some degree, ‘the defendant is made to suffer the uncertain consequences of its own undesirable conduct.’” (quoting AREEDA & HOVENKAMP, *supra* note 24, at ¶ 651c)).

⁹⁵ *Standard Oil*, 337 U.S. at 293.

⁹⁶ Although exclusive dealing arrangements are prosecuted under Sherman Act § 1 and Clayton Act § 3 (rather than § 2) the emphasis here is on the apparent ubiquity (across all of antitrust law) of a relaxed causation standard.

⁹⁷ *Standard Oil*, 337 U.S. at 302.

⁹⁸ *Id.* at 309-10.

⁹⁹ *Barry Wright Corp. v. Grinnell Corp.*, 724 F.2d 227 (1st Cir. 1983).

¹⁰⁰ *Id.* at 238.

clause[s] could have stopped [the defendant] from doing so.”¹⁰¹ So it is clear that, at least on the basis of *Grinnell*, when a court finds it “virtually impossible” to believe that anticompetitive consequences will result, conduct will not be deemed exclusionary.

V. CONCLUSION

¶31 To be classified as exclusionary, established § 2 jurisprudence traditionally required only that an antitrust defendant’s conduct be “reasonably capable” of making a significant contribution to the maintenance of monopoly power. This was not a high burden of proof and antitrust defendants were rarely successful in challenging liability based on lack of causation. Indeed, this was true in *United States v. Microsoft Corp.*, where the D.C. Circuit reaffirmed the traditional causation standard under § 2 and, in prescient language, rejected a defense based on lack of causation. Nevertheless, in *Rambus, Inc. v. Federal Trade Commission*, which involved deceptive conduct by a member of a standard-setting organization, the D.C. Circuit appeared to adopt a more stringent standard of causation, in effect grafting a but-for requirement onto § 2 monopolization claims. If the approach adopted by the *Rambus* court for defining exclusionary conduct is broadly construed and followed in the future, it will put antitrust plaintiffs in the impossible position of having to “reconstruct the hypothetical marketplace absent a defendant’s anticompetitive conduct”¹⁰² – a situation the D.C. Circuit specifically sought to avoid in *Microsoft*. It would also have the additional effect of encouraging would-be monopolists to take anticompetitive action early, thus making it *even more difficult* for antitrust plaintiffs to reconstruct the hypothetical marketplace. The court in *Microsoft* was prescient in this respect: “[t]o require that § 2 liability turn on a plaintiff’s ability or inability to reconstruct the hypothetical marketplace absent a defendant’s anticompetitive conduct would only encourage monopolists to take more and earlier anticompetitive action.”¹⁰³ In short, *Rambus* signals a marked shift in defining exclusionary conduct, at least within the context of standard-setting organizations.

¹⁰¹ *Id.* at 239.

¹⁰² *Microsoft*, 253 F.3d at 50.

¹⁰³ HOVENKAMP, *supra* note 1, at 35-47.