

SURVEYING THE MICROSOFT ANTITRUST UNIVERSE

By Amanda Cohen

Over the past decade, antitrust actions against Microsoft have brought to light the problems of applying traditional antitrust law to a high-technology industry.¹ Weighing harm to innovation against a desire to enable competition with a monopolist, courts have grappled with how much of its intellectual property Microsoft should share with the rest of the industry, and on whose terms. The cases against Microsoft have underscored the disconnect between a legal system that works over the course of years and an industry in which a shift in the technology standard can set in motion the downfall of a monopolist in a matter of months. At the same time, private litigants and crafters of settlement terms have found that the network effects that prevent entry into the platform software market make it difficult to craft effective remedies that are less drastic than a forced shift in the industry standard. This challenge faced the federal government and numerous state plaintiffs during the antitrust action they brought against Microsoft in 1998 (“*Microsoft IIP*”).² After several years of trial and appeals, the government prevailed. That action spurred a wave of private an-

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1. The Microsoft antitrust saga began in July 1994, when the United States Department of Justice Antitrust Division charged the company with using restrictive terms in its MS-DOS Original Equipment Manufacturer (“OEM”) licensing and software developer nondisclosure agreements to maintain a monopoly in the operating systems market. The suit ended with a consent decree, leaving the merits of the charges undecided. *United States v. Microsoft Corp.*, 56 F.3d 1448 (D.C. Cir. 1995) [hereinafter *Microsoft I*]. In 1997, believing that Microsoft had violated a provision of the consent decree, the Justice Department filed a civil contempt action against the company. *United States v. Microsoft Corp.*, 980 F. Supp. 537 (D.D.C. 1997). Although the trial court in that case granted a preliminary injunction against Microsoft, the United States Court of Appeals for the District of Columbia held that the consent decree did not prohibit the technological bundling of Internet Explorer and Windows under the integrated products exception clause. *United States v. Microsoft Corp.*, 147 F.3d 935 (D.C. Cir. 1998) [hereinafter *Microsoft II*]. In this action (*Microsoft II*), the court declined to render an opinion as to whether the bundling violated the Sherman Act. *Id.*

The Microsoft antitrust litigation has generated many court decisions, published and unpublished; the case name short citation for all actions involving Microsoft will be “*Microsoft*” unless otherwise designated.

2. *United States v. Microsoft Corp.*, 87 F. Supp. 2d 30 (D.D.C. 2000) [hereinafter *Microsoft III*].

titrust suits against Microsoft in the United States, as well as a European Commission investigation.

This Note surveys the current status of the public and private enforcement actions against Microsoft in the United States and in Europe. It will assess some probable effects of these actions from both legal and economic perspectives. Part I details the domestic actions against Microsoft, including the content of and challenges to the 2002 settlement that, in large part, ended *Microsoft III*. Part I also covers the private domestic actions filed as a result of the government investigation. Part II will describe the ongoing investigation in the European Union. Part III criticizes some applications of traditional antitrust doctrine in the cases against Microsoft, and examines the new, high-technology antitrust institutions that have grown out of the actions. This Part then looks beyond the courtroom to whether market forces will check Microsoft's monopoly power before the legal system can. Part IV concludes that the first round of high technology-driven modifications to antitrust doctrine is nearing a close, and that the next round will evaluate the new tools that have arisen from the Microsoft cases.

I. ANTITRUST ACTIONS IN THE UNITED STATES

A. Overview of U.S. Antitrust Law

In *Microsoft III*, the district court found Microsoft liable for violations of both section 1 and section 2 of the Sherman Act.³ Section 1 governs combinations, and prohibits those that restrain trade.⁴ Agreements to fix prices, divide markets, and tie unrelated goods are most likely in violation of section 1. When a company forces the sale of two separate products together, it is liable for a section 1 tying violation, as long as the company has market power in the tying product market (the market of the principal good, to which another good is attached), offers consumers no option to purchase the products separately, and affects a significant share of commerce with its arrangement.⁵

3. *Id.* at 35.

4. Sherman Antitrust Act, 15 U.S.C. § 1 (2000). Section 1 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." *Id.*

5. See *United States v. Microsoft Corp.*, 253 F.3d 34, 85 (D.C. Cir. 2001). To violate § 1, a tying arrangement must have the following characteristics: "(1) the tying and tied goods are two separate products; (2) the defendant has market power in the tying product market; (3) the defendant affords consumers no choice but to purchase the tied product from it; and (4) the tying arrangement forecloses a substantial volume of com-

Section 2 proscribes certain behavior by monopolists, companies that can profitably charge a supra-competitive price in a defined market.⁶ Under section 2, monopolists may not intentionally garner their market power, nor may they willfully maintain market power achieved by superior business sense or accident.⁷ Finally, a firm is liable for attempted monopolization if, intending to monopolize, it engages in anticompetitive behavior and has a dangerous probability of success.⁸

B. United States v. Microsoft Corporation

In November 2001, the U.S. Department of Justice (DOJ) and nine states⁹ reached a settlement with Microsoft that imposed penalties much more conservative than were initially imposed by the district court in June 2000.¹⁰ The most important change in the approach of the settling plaintiffs was their decision not to pursue structural relief that would break Microsoft into two companies. District Court Judge Colleen Kollar-Kotelly issued her consent decree¹¹ in November 2002, approving the substantive provisions of the settlement, but rejecting terms that would have prevented

merce." *Id.*; see also *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 461-62 (1992); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 12-18 (1984). Tying generally is not analyzed under the rule of reason because "certain tying arrangements pose an unacceptable risk of stifling competition and therefore are unreasonable 'per se.'" *Jefferson Parish*, 466 U.S. at 9.

6. Sherman Antitrust Act, 15 U.S.C. § 2. Section 2 states that "every person who shall 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, shall be deemed guilty of a felony." *Id.*

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

8. See *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 456 (1993). A successful claim of attempted monopolization requires a showing "(1) that the defendant has engaged in predatory or anticompetitive conduct with (2) a specific intent to monopolize and (3) a dangerous probability of achieving monopoly power." *Id.*

9. These states [hereinafter "the settling states"] are Illinois, Kentucky, Louisiana, Maryland, Michigan, New York, North Carolina, Ohio, and Washington. See *New York v. Microsoft Corp.*, 231 F. Supp. 2d 203 (D.D.C. 2002) (approving settling states' joining the settlement reached by the United States and Microsoft).

10. See *United States v. Microsoft Corp.*, 97 F. Supp. 2d 59 (D.D.C. 2000), *aff'd in part and rev'd in part*, 253 F.3d 34 (D.C. Cir. 2001).

11. Under the Tunney Act, 15 U.S.C. § 16(b)-(h), a settlement between the federal government and a defendant found liable for antitrust violations must be reviewed by a federal judge to ensure that it is in the best interests of the public and is not politically motivated. See 15 U.S.C. § 16(e).

close, continuous judicial monitoring of the implementation process.¹² Nine other states¹³ and the District of Columbia declined to join the settlements, and litigated the remedy issue.¹⁴ The court ultimately decreed a final judgment paralleling the DOJ consent decree.¹⁵ Massachusetts has appealed that verdict.¹⁶

1. *History of the Case*

In 2001, in a per curiam decision, the Court of Appeals for the District of Columbia Circuit reversed a district court ruling that Microsoft had unlawfully attempted to monopolize the market for "Internet browsers" and that Microsoft's alleged tying of Internet Explorer to Windows was per se unlawful.¹⁷ The court found that the government had neither defined the "Internet browser" market nor demonstrated substantial barriers to entry in that market that would give Microsoft a dangerous probability of success in a monopolization attempt.¹⁸

The court remanded the tying claim to the trial court for reconsideration under the rule of reason, rather than treating it as a per se violation

12. *United States v. Microsoft Corp.*, 231 F. Supp. 2d 144 (D.D.C. 2002).

13. These states, hereinafter known as the "litigating states," are California, Connecticut, Florida, Iowa, Kansas, Massachusetts, Minnesota, Utah, and West Virginia. See *New York v. Microsoft Corp.*, 224 F. Supp. 2d 76 (D.D.C. 2002) (memorandum opinion regarding litigating states' proposed remedies).

14. See *Non-Settling States Remedies Proceedings*, at <http://www.microsoft.com/presspass/legal/nonsettling.asp> (last visited Dec. 18, 2003) (containing transcripts and other documents related to the spring 2002 trial on the remedies conducted by the litigating states).

15. See *Microsoft*, 224 F. Supp. 2d at 76; *New York v. Microsoft Corp.*, No. 98-1233 (CKK), 2002 WL 31961461, 2002-2 Trade Cas. (CCH) ¶ 73, 854 (D.D.C. Nov. 1, 2002) (order giving final judgment in litigating states' action).

16. *New York v. Microsoft Corp.*, No. 98-1233 (CKK), 2002 WL 31961461 (D.D.C. Nov. 1, 2002), *appeal docketed sub nom. Massachusetts v. Microsoft Corp.*, No. 02-7155 (D.C. Cir. Nov. 4, 2003).

17. *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001). The district court held that Microsoft's tying of Internet Explorer to Windows violated section 1 of the Sherman Act. *United States v. Microsoft Corp.*, 87 F. Supp. 2d 30, 35 (D.D.C. 2000). The district court also held that Microsoft violated section 2 of the Sherman Act by (1) maintaining a monopoly in Intel-compatible PC operating systems and (2) attempting to monopolize "Internet browsers." *Id.* Based on its findings of antitrust liability, the district court ordered that Microsoft be split into two separate companies. *United States v. Microsoft Corp.*, 97 F. Supp. 2d 59, 64-65 (D.D.C. 2000).

18. *Microsoft*, 253 F.3d at 81-83. Although the court could have remanded the fact-intensive market definition inquiry, it reversed the district court's holding because plaintiffs offered neither a coherent theory about how network effects would act as a substantial barrier to entry nor evidence that Microsoft would likely erect significant barriers to entry once it gained a dominant market share. *Id.* at 84.

because the novelty of the case made a facial analysis of Microsoft's conduct inappropriate.¹⁹ Because the allegedly illegal tying conduct differed from that in typical tying cases,²⁰ the court allowed consideration of possible pro-competitive justifications for the conduct.²¹ Under the rule of reason analysis, the government would have to show that Microsoft's conduct unreasonably restrained competition.²² More broadly, the decision carved out an exception to the per se tying rule for platform software.²³

The D.C. Circuit affirmed the district court's holding that Microsoft had unlawfully maintained a monopoly in Intel-compatible PC operating systems.²⁴ The court reversed the district court, however, on its holding that Microsoft's course of conduct as a whole constituted a separate violation of section 2,²⁵ and found that the district court erred in finding certain

19. *Id.* at 84.

20. Departing from a classic since-rejected justification that tying is necessary to control the quality of the tied product, Microsoft argued that Internet Explorer and Windows were actually an integrated product that improved the value of the operating system (the tying product) to both users and third-party software makers. *See id.* at 90-91. The court of appeals found lower courts had never completed a full efficiency analysis of software bundling ostensibly justified similarly to Microsoft's argument. *Id.* at 91-92.

21. *Id.* at 92.

22. A rule of reason analysis would allow for "consideration of the benefits of bundling in software markets, particularly those for OSs, and a balancing of these benefits against the costs to consumers whose ability to make direct price/quality tradeoffs in the tied market may have been impaired." *Id.* at 94.

23. *See id.* at 89-96 ("[I]ntegration of new functionality into platform software is a common practice and . . . wooden application of per se rules in this litigation may cast a cloud over platform innovation in the market for PCs, network computers and information appliances.").

24. *Id.* at 58-78. The court determined that a particular Microsoft business practice was exclusionary if (1) it harmed the competitive process and thereby consumers, (2) it harmed competition, not just a competitor, (3) no pro-competitive justification was offered, and (4) if a justification was offered, the anticompetitive harm resulting from the conduct outweighed the pro-competitive benefit. *Id.* at 58-59. The court applied this test to the four types of behavior held by the district court to violate section 2:

(1) the way in which [Microsoft] integrated [Internet Explorer] into Windows; (2) its various dealings with Original Equipment Manufacturers ("OEMs"), Internet Access Providers ("IAPs"), Internet Content Providers ("ICPs"), Independent Software Vendors ("ISVs"), and Apple Computer; (3) its efforts to contain and to subvert Java technologies; and (4) its course of conduct as a whole.

Id. at 58.

25. *Id.* at 78. The Court of Appeals reversed because the district court had not identified a series of specific acts by Microsoft, the cumulative effect of which was significant harm to competition. *Id.* Rather, the district court based its holding, "with one exception," on "broad, summarizing conclusions." *Id.*

Microsoft actions exclusionary.²⁶ Citing Microsoft's reduced liability, the Court of Appeals vacated the breakup order issued by the district court.²⁷

On remand, the settling states and the DOJ dropped the tying claim²⁸ and proceeded to negotiate a settlement based on Microsoft's liability for unlawfully maintaining its Intel-compatible PC operating systems monopoly.²⁹ After some revisions to the initial agreement's compliance procedures, Judge Kollar-Kotelly³⁰ approved the settlement in her consent decree.³¹

Table 1: Microsoft's Liability after Appeals Court Verdict

Plaintiffs' Claim	District Court Holding	Appeals Court Holding
Monopoly Maintenance	Microsoft violated § 2	Affirmed
Tying	Microsoft violated § 1	Vacated and Remanded
Attempted Monopolization	Microsoft violated § 2	Reversed

2. Requirements of the November 2002 Settlement

The consent decree approved by the district court in November 2002 adhered to the substantive remedies negotiated by Microsoft and the government plaintiffs to ameliorate the effects of Microsoft's anticompetitive behavior.³² The goals of the settlement are to end Microsoft's restrictions

26. *Id.* at 58-78.

27. *Id.* at 107. For a more in-depth discussion of the D.C. Circuit's holdings, see Samuel Noah Weinstein, Note, *United States v. Microsoft Corp.*, 17 BERKELEY TECH. L.J. 273 (2002).

28. Competitive Impact Statement, Part III, § A.3, at 8, *United States v. Microsoft Corp.*, Nos. 98-1232(CKK) & 98-1233(CKK), filed Nov. 15, 2001, available at <http://www.usdoj.gov/atr/cases/f9500/9549.htm>.

29. *See id.*; Stipulation and Revised Proposed Final Judgment, *U.S. v. Microsoft Corp.*, Nos. 98-1232(CKK) & 98-1233(CKK), filed Nov. 6, 2001, available at <http://www.usdoj.gov/at/cases/f9400/9495.htm>. This settlement was submitted by United States and settling states for Tunney Act review by Judge Kollar-Kotelly.

30. In the course of its review of the district court ruling, the D.C. Circuit found district court judge Thomas Penfield Jackson had acted inappropriately by speaking to reporters during the trial. *See United States v. Microsoft Corp.*, 253 F.3d 34, 107-19 (D.C. Cir. 2001). Upon remanding the case, the court appointed Judge Colleen Kollar-Kotelly to handle the proceedings.

31. *United States v. Microsoft Corp.*, 231 F. Supp. 2d 144 (D.D.C. 2002).

32. *Id.*; *see* Final Judgment, *United States v. Microsoft Corp.*, CA No. 98-1232 (CKK), filed Nov. 12, 2002 (D.D.C. 2002) [hereinafter *United States' & Settling States' Settlement*] (judgment adopting plaintiffs' Third Revised Proposed Final Judgment), available at <http://www.usdoj.gov/atr/cases/f200400/200457.htm>.

on middleware,³³ to prevent the company from impeding similar threats to its dominance in the future, and to restore the competitive conditions thwarted by Microsoft's anticompetitive conduct.³⁴ These goals are specifically focused on the entry of middleware into the market, as that is the extent of Microsoft's liability.³⁵

a) Anti-Retaliation and Uniform Licensing Provisions

Microsoft threatened to support the "3DX" technology of AMD, an Intel competitor, if Intel did not stop aiding Sun Microsystems by developing a fast, cross-platform virtual machine using Sun's Java standards.³⁶ Microsoft also threatened to stop supporting and developing its Mac Office program, used by ninety percent of Macintosh users running an office suite, if Apple Computer continued to include Netscape as its default browser.³⁷ As the appellate court found these and other threats to be anticompetitive in violation of section 2 of the Sherman Act, the *United States' and Settling States' Settlement* (or "*Settlement*") bars Microsoft from retaliating against original equipment manufacturers ("OEMs") and independent hardware and software vendors for distributing, supporting, promoting, or developing software that competes with Microsoft Platform Software.³⁸ Microsoft must also provide uniform licenses to OEMs to

33. Middleware is software that allows two applications to exchange data without either application being equipped to communicate with the other. Each application is programmed to send data to the middleware, and middleware acts as a translator to facilitate the exchange. Without middleware, software developers must create several different versions of their software that can communicate directly with different operating systems (e.g., Windows, Macintosh, GNU/Linux). But with middleware, a software developer writes only one version of the software that can communicate with the middleware, and that middleware can then relay data to any operating system. The existence of middleware would lower the applications barrier to entry in the operating systems market, as consumers would not have to sacrifice availability of software for a preferred operating system. In *Microsoft III*, Microsoft's business practices came under scrutiny in relation to two kinds of middleware: Netscape Navigator Web browsing software and Sun Microsystems' Java technologies. For a more thorough explanation of middleware, see Derek Slater, *What Is Middleware?*, DARWIN MAG., Apr. 4, 2001, at <http://www.darwinmag.com/learn/curve/column.html?ArticleID=93> (last visited Dec. 17, 2003); "Middleware," WEBOPEDIA.COM, at <http://www.webopedia.com/TERM/M/middleware.html> (last visited Dec. 17, 2003).

34. See U.S. Department of Justice, Competitive Impact Statement, Part IV, § B, submitted Nov. 15, 2001, available at <http://www.usdoj.gov/atr/cases/f9500/9549.htm> (last visited Dec. 18, 2003).

35. See Table 1 *supra* p.334.

36. *United States v. Microsoft Corp.*, 253 F.3d 34, 77 (D.C. Cir. 2001).

37. *Id.* at 72-74.

38. See *United States' & Settling States' Settlement*, *supra* note 32, §§ III.A, F.1.

promote simpler licensing terms and prevent the company from compelling OEMs to use its products.³⁹

b) Flexibility for OEMs in Licensing and Technology

Microsoft's restrictive licensing agreements with OEMs were found to be anticompetitive because, by forcing the inclusion of the Internet Explorer icon on the desktop, Microsoft deterred the OEMs from installing a second browser for fear of consumer confusion caused by the presence of two browser icons on the desktop. By deterring OEMs from putting rival browsers on desktops, Microsoft was closing off one of the most effective means of distribution of the software. The *Settlement* addresses this problem by specifically prohibiting the restrictions identified by the district court and affirmed by the appeals court as causing the deterrence. Under the *Settlement*, OEMs must be free to install and display icons, shortcuts and menu entries for competing software in any size or shape, and, along with end users, can designate the competing software as a default.⁴⁰ OEMs can use the initial boot sequence to promote the services of the Internet access providers they select and may also choose to launch competing operating systems with no interference by Microsoft.⁴¹

Like the licensing agreements, Microsoft's commingling of Internet Explorer and Windows code prevented OEMs from pre-installing a rival browser, as that browser would necessarily be the second one on the desktop, thus increasing product testing costs and wasting valuable hard drive space. Although the commingling was found to violate section 2 of the Sherman Act, the consent decree does not require the company to "uncommingle" the code by removing its browser. Giving OEMs and end users the ability to replace Internet Explorer with a competing browser was sufficient, as the liability was based on the anticompetitive effect of the commingling (deterring OEMs from installing a non-Microsoft browser), not on the commingling itself.⁴²

Microsoft also integrated Internet Explorer and Windows in violation of section 2 by excluding Internet Explorer from the Add/Remove Programs utility. To address the integration liability, the *Settlement* provides that on the desktop or in the Start menu, OEMs and end users must be free to enable or remove access to both Microsoft's and competing software by

39. *See id.* § III.B.

40. *Id.* § III.C.1-2.

41. *Id.* § III.C.3-4.

42. *See United States v. Microsoft Corp.*, 231 F. Supp. 2d 144, 179-181 (D.D.C. 2002).

altering icons, shortcuts, or menu entries.⁴³ In addition, Microsoft is prohibited from using its operating system software to automatically alter the configuration implemented by the OEM or end user without seeking confirmation from the user at least two weeks after the computer's initial use.⁴⁴ The *Settlement* also prevents Microsoft from restricting through licensing terms an OEM's ability to exercise any of these technological options.⁴⁵

In its condemnation of the restrictive licensing terms, the appellate court excepted Microsoft's restrictions on the automatic launch of an alternative user interface. The court accepted Microsoft's justification of protecting the company's copyrighted material from "drastic alteration." Although the court made only this narrow exception for "drastic alterations," the *Settlement* still gives only limited protection to the automatic launch of non-Microsoft programs in an OEM's original configuration that do not drastically alter Microsoft's copyrighted material. Section III.C.3 of the settlement allows Microsoft to restrict the automatic launching of any non-Microsoft Middleware Product at the conclusion of boot sequences and connections to the Internet, regardless of whether the product interferes with the Microsoft user interface.⁴⁶ The automatic launching of the non-Microsoft product is protected only where it replaces the launch of a Microsoft Middleware Product, and the program must provide either no user interface or a user interface that resembles that of the equivalent Microsoft Middleware Product.⁴⁷ Judge Kollar-Kotelly noted that this provision would empower Microsoft to control innovation in these middleware products, as all non-Microsoft developers writing for Windows would have to keep in step with Microsoft programs or risk being shut out of an OEM's original configuration by Microsoft asserting its interest in providing consistent product characteristics.⁴⁸ Judge Kollar-Kotelly did not, however, find the provision to be contrary to the public interest. She noted that the settlement process necessitated negotiation, and that such a provision was permissible for the government plaintiffs to offer in exchange for another, more pro-plaintiff restriction.⁴⁹ Critics of the settlement charge that this provision will allow Microsoft to block development of a new technology—or stall the new development long enough to create its own

43. *United States' & Settling States' Settlement*, *supra* note 32, § III.H.1.

44. *Id.* § III.H.3.

45. *Id.* § III.C.6.

46. *Id.* § III.C.3.

47. *Id.*

48. *United States v. Microsoft Corp.*, 231 F. Supp. 2d 144, 173-74 (D.D.C. 2002).

49. *Id.* at 174.

version of the product—so that its monopoly power will never be disrupted by a surprise shift of the industry standard to some new innovation.⁵⁰

- c) Agreements with Internet Access Providers (“IAPs”), Internet Content Providers (“ICPs”), and Independent Software Vendors (“ISVs”)

The appellate court found that Microsoft’s exclusive contracts with fourteen of the top fifteen IAPs in North America constituted illegal monopoly maintenance because the contracts foreclosed the most valuable distribution channel for a browser besides OEM pre-installation. In addition, Microsoft required ISVs to promote Microsoft’s Java Virtual Machine (a potential Windows competitor) in exchange for the release of Windows technical information the ISVs needed to develop their software. To remedy the effects of these anticompetitive dealings, the *Settlement* provides that Microsoft cannot enter into any exclusive or fixed-percentage agreements with IAPs, ICPs, ISVs, hardware vendors, or OEMs, with the exception of bona fide joint ventures for new products, technologies or services, and the licensing of intellectual property from third parties.⁵¹ The intellectual property exception concerns those who support the enforcement action because Microsoft could evade the non-exclusivity requirement of any agreement simply by adding an intellectual property license to an otherwise prohibited contract.⁵²

Microsoft cannot condition placement of IAP or ICP icons on the desktop on a promise to refrain from distribution, promotion, or use of competing software, unless that agreement is a joint venture or joint development or services arrangement.⁵³ Similarly, Microsoft cannot withhold consideration from an ISV pending that ISV’s refraining from developing, using, distributing or promoting competing software, unless that agreement is “reasonably necessary to . . . a bona fide contractual obligation” to promote Microsoft’s software or develop software in conjunction with Microsoft.⁵⁴ This exception allows Microsoft to pay an ISV to pro-

50. Timothy F. Bresnahan, *A Remedy that Falls Short of Restoring Competition*, 16 ANTITRUST 67, 69 (2001).

51. *United States’ & Settling States’ Settlement*, *supra* note 32, § III.G.

52. *See Microsoft Begins Implementing Antitrust Settlement*, 16 SOFTWARE L. BULL. 3 (2002).

53. *United States’ & Settling States’ Settlement*, *supra* note 32, § III.G.2.

54. *Id.* § III.F.2

mote Microsoft software and enforce that contract by forcing the ISV to deal exclusively with Microsoft.⁵⁵

d) Required Disclosures

The *Settlement* requires Microsoft to disclose some technology to potential competitors to lower barriers to entry in an attempt to restore the competitive conditions that might exist absent Microsoft's anticompetitive behavior. The decree requires Microsoft to disclose interfaces and other technical information used by its middleware to interoperate with its operating system.⁵⁶ In a provision designed to be forward-looking, Microsoft must license any communications protocol used to interoperate or communicate with any of its server operating products, despite this exceeding the scope of the company's liability.⁵⁷ "Server operating products" are not defined in the settlement, however, leaving Microsoft free to claim that this provision does not require the disclosure of protocols used by the browser to communicate with Web servers.⁵⁸

Microsoft is not required to license intellectual property rights in its operating system royalty-free, despite the liability for monopoly maintenance in that market; instead, it must only make such communications protocols available on reasonable and nondiscriminatory terms.⁵⁹ Due to the strong network effects of the operating systems market, the court found too tenuous a causal connection between Microsoft's exclusionary conduct and its market power to try to impose such an extreme remedy.⁶⁰ The court followed the settlement agreement's determination that Microsoft need not disclose its operating system source code to aid in compliance; only the technical committee⁶¹ created by the decree needs the source code to monitor compliance.⁶² Also, Microsoft is allowed security-based limitations on its disclosures of technical information.⁶³

55. See *Microsoft Begins Implementing Antitrust Settlement*, *supra* note 52.

56. *United States' & Settling States' Settlement*, *supra* note 32, § III.D.

57. See *id.* § III.E.

58. Bresnahan, *supra* note 50, at 68.

59. *United States' & Settling States' Settlement*, *supra* note 32, § III.I.

60. *United States v. Microsoft Corp.*, 231 F. Supp. 2d 144, 192-93 (D.D.C. 2002).

61. The current committee members, serving 30-month appointments, are Harry Saal (selected by the DOJ and settling states), Franklin Fite (selected by Microsoft), and Edward Stritter (selected jointly).

62. *United States' & Settling States' Settlement*, *supra* note 32, § IV.B.8.c.

63. *Id.* § III.J.

e) Term of Decree

The court, noting the special circumstances created by the rapid changes of the computer industry, agreed to a five-year term for implementation of the consent decree instead of the standard ten-year term.⁶⁴ Plaintiffs may apply to the court for a one-time extension of up to two years in any instance where Microsoft has demonstrated a pattern of willful and systematic violations of the decree.⁶⁵

f) Compliance and Enforcement

Although the court abbreviated the term of the decree, it objected to language that appeared to limit the court's continuing jurisdiction.⁶⁶ The proposed decree stated that the court retained jurisdiction "for the purpose of enabling either of the parties thereto *to apply to this Court* at any time for further orders and directions"⁶⁷ The court rejected this definition of jurisdiction, and ultimately approved a revised version that empowers the court "to *sua sponte* issue orders or directions regarding to [sic] the final judgment"⁶⁸ The court will supervise the compliance procedures in conjunction with the three-person Technical Committee, aided by the Microsoft Compliance Officer.⁶⁹

3. Challenges

Nine states and the District of Columbia refused to join the settlement, which they viewed as inadequate to loosen Microsoft's unlawfully maintained monopoly in the operating systems market, and chose to litigate the remedies. The court eventually issued a judgment similar to the settling states' consent decree. Massachusetts chose to appeal this judgment.⁷⁰ In addition, two industry groups that have monitored the litigation since the

64. *See id.* § V.A.

65. *Id.* § V.B.

66. *United States v. Microsoft Corp.*, 231 F. Supp. 2d 144, 200 (D.D.C. 2002).

67. *Id.* (quoting Second Revised Proposed Final Judgment §VII, *United States v. Microsoft Corp.*, Nos. 98-1232(CKK) & 98-1233(CKK), filed Feb. 27, 2002, *available at* <http://www.usdoj.gov/atr/cases/f10100/10146a.htm>) (emphasis added).

68. *Id.* at 201; *see United States' and Settling States' Settlement*, *supra* note 32, § VII.

69. *See United States' and Settling States' Settlement*, *supra* note 32, § VII.

70. *New York v. Microsoft Corp.*, No. 98-1233 (CKK), 2002 WL 31961461 (D.D.C. Nov. 01, 2002), *appeal docketed sub nom. Massachusetts v. Microsoft Corp.*, No. 02-7155 (D.C. Cir. Nov. 4, 2003).

beginning are seeking permission to intervene in the lawsuit to challenge the final judgment.⁷¹

As the sole state continuing to challenge the Microsoft judgment, Massachusetts seeks tighter restrictions on Microsoft's business practices. Massachusetts Attorney General Tom Reilly has maintained that the current remedies will neither end Microsoft's anticompetitive behavior nor level the market playing field to remove the unfair advantages Microsoft gained through illegal acts, specifically with regard to Java. The state is also challenging the judgment's failure to require Microsoft to stop commingling its software unlawfully, as well as the lack of a "truth in advertising" provision in the final judgment that would prohibit the company from misleading software developers about its compliance with industry standards.⁷²

Massachusetts seeks an injunction requiring Microsoft to unbundle Windows from all middleware products, a demand Microsoft dismisses as technologically unfeasible. Additionally, the state would like to see Microsoft disclose more extensive Windows application programming interfaces to third-party developers and provide an open-source license of the Internet Explorer code.⁷³ Massachusetts' inquiry has been complicated by agreements between the DOJ and the settling states that prohibit the states from helping with Massachusetts' investigation. The D.C. Circuit heard oral arguments on November 4, 2003.⁷⁴

Besides Massachusetts, several computer industry trade groups⁷⁵ have challenged the settlement agreement, maintaining that their interests were not adequately represented in the Tunney Act consent proceedings.⁷⁶ So far they have been denied leave to intervene, but their appeal remains be-

71. See *United States v. Microsoft Corp.*, No. Civ. A. 98-1232 CKK, 2003 WL 262324 (D.D.C. Jan. 11, 2003).

72. Press Release, Massachusetts Attorney General Office, AG Reilly Files Brief in Microsoft Appeal (May 5, 2003), available at http://www.ago.state.ma.us/scripts/dynamic_print.asp?pg=/press_rel/micappeal.

73. See Brief for Respondent at 44-45, 51, *New York v. Microsoft Corp.*, No. 98-1233 (CKK), 2002 WL 31961461 (D.D.C. Nov 01, 2002), *appeal docketed sub nom. Massachusetts v. Microsoft Corp.*, No. 02-7155 (D.C. Cir. Nov. 4, 2003).

74. See *New York v. Microsoft Corp.*, No. 98-1233 (CKK), 2002 WL 31961461 (D.D.C. Nov 01, 2002), *appeal docketed sub nom. Massachusetts v. Microsoft Corp.*, No. 02-7155 (D.C. Cir. Nov. 4, 2003).

75. In January 2003, Judge Kollar-Kotelly denied a Motion to Intervene for Purposes of Appeal filed by the Computer & Communications Industry Association ("CCIA") and Software & Information Industry Association ("SIIA"), whose members include Microsoft competitors such as Time Warner (formerly AOL-Time Warner), Oracle, and Sun Microsystems. See *Microsoft*, 2003 WL 262324, at *1.

76. *Id.* at *2-*4.

fore the D.C. Circuit.⁷⁷ In addition to this attempt to influence the government's enforcement action, some of the companies in each trade group have also pursued private actions against Microsoft.⁷⁸

Table 2: Summary of Parties' Present Involvement in *Microsoft III*

Party	Current Status
U.S. Department of Justice	Enforcing consent decree
Settling States	Enforcing consent decree
Litigating States (except Massachusetts)	Enforcing final judgment via joint enforcement committee
Massachusetts	Appealing final judgment. Case pending before D.C. Circuit.
CCIA/SIIA	Appealing denial of motion to intervene to challenge consent decree. Case pending before D.C. Circuit.

4. Compliance Procedures

To aid the court in monitoring Microsoft's compliance, the *Microsoft III* parties must file semiannual joint status reports detailing the company's efforts to implement the settlement terms. Judge Kollar-Kotelly, assisted by the three-person technical oversight committee, reviews reports describing complaints received by Microsoft, the oversight committee, or the plaintiffs during the most recent reporting period. Plaintiffs must catalog the number and types of complaints, which complaints have been resolved, the number of unresolved complaints under investigation, and how many remain uninvestigated.

In July 2003, in the first joint status report, the DOJ accused Microsoft of inaction regarding its licensing program, prompting the company's revision of the licensing terms.⁷⁹ As a part of the 2002 settlement, Microsoft agreed to make its communications protocols available to third parties on

77. See *United States v. Microsoft Corp.*, No. Civ. A. 98-1232 (CKK), 2003 WL 262324 (D.D.C. Jan. 11, 2003), *appeal docketed sub nom. United States v. Microsoft Corp. v. CCIA*, No. 03-5030, (D.C. Cir. Nov. 4, 2003).

78. Also, on January 31, 2003, CCIA filed a formal complaint with the European Commission, charging Microsoft violated European competition laws by using Windows XP to gain power in other markets, such as mobile phones and instant messaging. These allegations are not yet part of the European investigation of Microsoft. See *Trade Group Sues Microsoft for Antitrust Violations in Europe*, 10 AN. ANTITRUST LITIG. REP. 11 (2003).

79. See Joint Status Report on Microsoft's Compliance with the Final Judgments, *United States v. Microsoft Corp.*, No. 98-1232 (CKK), §II.A.5 (D.D.C. July 3, 2003), available at <http://www.usdoj.gov/atr/cases/f201100/201135.htm>.

“reasonable and nondiscriminatory” terms in the Microsoft Communications Protocol Licensing Program (MCPP).⁸⁰ To implement that provision, Microsoft eased restrictions and changed the royalty schedule for software makers who license Windows protocols to allow their software to function properly with the operating system. In response to government criticism at an October 2003 interim status hearing that the changes were not effective, Microsoft cited licensing agreements made with Cisco Systems, Laplink Software, Tandberg Television, the SCO Group, and UTStarCom as evidence that its new licensing terms are reasonable.⁸¹

In the most recent joint status report, filed January 16, 2004, the plaintiffs asserted that Microsoft’s licensing program still does not fulfill the goals of section III.E. Despite Microsoft’s August 2003 modifications, the MCPP has attracted licensees primarily interested in using only a narrow selection of the protocols available under the program, possibly due to a pricing structure that charges licensees per functional category of protocols actually used in their products.⁸² The government expressed concern that the current licensees’ development projects will not “spur the emer-

80. Final Judgment, *United States v. Microsoft Corp.*, No. 98-1232 (CKK), Nov. 12, 2002, at 4 (D.D.C. 2002) (judgment adopting plaintiffs’ Third Revised Proposed Final Judgment), available at <http://www.usdoj.gov/atr/cases/f200400/200457.htm>. Section III.E of the settlement states:

Starting nine months after the submission of this proposed Final Judgment to the Court, Microsoft shall make available for use by third parties, for the sole purpose of interoperating or communicating with a Windows Operating System Product, on reasonable and non-discriminatory terms . . . any Communications Protocol that is, on or after the date this Final Judgment is submitted to the Court, (i) implemented in a Windows Operating System Product installed on a client computer, and (ii) used to interoperate, or communicate, natively (*i.e.*, without the addition of software code to the client operating system product) with a Microsoft server operating system product.

Id. at 4.

81. Transcript of Status Conference Before the Honorable Colleen Kollar-Kotelly, United States District Judge at 17-18, *United States v. Microsoft Corp.*, No. 98-1232 (CKK), Oct. 24, 2003 (D.D.C. 2003) (Interim Status Conference) [hereinafter *Transcript of Interim Status Conference*].

82. See Joint Status Report on Microsoft’s Compliance with the Final Judgments, *United States v. Microsoft Corp.*, CA No. 98-1232 (CKK), at 5-7 (D.D.C. Jan. 16, 2004), available at <http://www.usdoj.gov/atr/cases/f202100/202129.htm> (last visited Jan. 25, 2004) [hereinafter *January 2004 Joint Status Report*]. The communications protocols are categorized into the following fourteen tasks: file services, media streaming services, terminal services, certificate services, authentication services, collaboration server, digital rights management server, multi-player games server, proxy/firewall/NAT server, rights management server, systems management server, virtual private network server, print/fax server, and web server. *January 2004 Joint Status Report, supra*, at 5-6 & n.3.

gence in the marketplace of broad competitors to the Windows desktop.”⁸³ The MCPP is also unattractive due to complex royalty terms, a long (fifty-page) licensing agreement, and scope-of-use restrictions the exact extent of which is difficult to understand.⁸⁴ After the status report was filed, Microsoft announced changes to the MCPP to address these concerns.⁸⁵

In addition to policing those remedy provisions directly aimed at past violations, plaintiffs have also begun to identify potential new threats. At the October 2003 interim status hearing, plaintiffs voiced concern about a possible violation of a settlement provision that prohibits Microsoft from interfering with an end user’s choice of a default browser unless Internet Explorer is technologically necessary.⁸⁶ Microsoft launched an online music store and placed an icon on the Windows XP desktop labeled “Buy Music Online” that, if clicked, opens Internet Explorer and accesses the Microsoft music site. At the October hearing, plaintiffs stated that they were unconcerned with any advantage Microsoft may garner for its online music services through this desktop icon.⁸⁷ Rather, they objected to the launching of Internet Explorer in a place where the default browser that the user selects should be launched, in violation of settlement section III.H.2.⁸⁸

Microsoft maintained that this placement is legal under the exception in that provision that allows an automatic launch of a Microsoft middle-ware product instead of a non-Microsoft product when necessary for “valid technical reasons.”⁸⁹ The parties agreed to refer the issue to the technical committee, which is examining the Windows XP source code, as well as the source code of “Longhorn,” the next Microsoft operating system, to ensure that the programs honor user default middleware choices in

83. *Id.* at 7.

84. *See id.* at 10.

85. *See* Microsoft Communications Protocol Program, Protocol Licensing Home Page, at <http://members.microsoft.com/consent/Info/default.aspx> (last visited Jan. 25, 2003) (containing pricing and licensing terms for protocols addressed in the settlement). In the *January 2004 Joint Status Report*, Microsoft promised to release a shorter license agreement that makes two dozen protocols available royalty-free, makes others available for a fixed fee or fixed fee per unit, and changes the license evaluation program to make it easier for potential licensees to review the technical documentation of the protocols. *See January 2004 Joint Status Report*, *supra* note 82, at 16. The company asserted, however, that if its licensing terms are reasonable, it should not be blamed for the MCPP failing to have the desired remedial effects. *Id.*

86. *Transcript of Interim Status Conference*, *supra* note 81.

87. *Id.* at 9.

88. *Id.*; *see United States’ & Settling States’ Settlement*, *supra* note 32, § III.H.2.

89. *Transcript of Interim Status Conference*, *supra* note 81; *see also United States’ & Settling States’ Settlement*, *supra* note 32, § III.H.2.b.

compliance with § III.H.⁹⁰ In January 2004, Microsoft announced that, although it believed its music icon's operation to be consistent with the settlement, it would remove the override of the user's default browser from Windows XP, and would have a "Windows Update" download available in February or March 2004 to effect the modification.⁹¹

C. Private Antitrust Lawsuits

Section 4 of the Clayton Act allows a private entity suffering harm resulting from a violation of the antitrust laws to recover treble damages.⁹² Leveraging the court's decision that private litigants could litigate based on the findings of fact in *Microsoft III*,⁹³ many Microsoft consumers and competitors, as well as groups of individual consumers, have sought monetary relief. Most of the private antitrust actions against Microsoft were consolidated into one case, *In re Microsoft Corp. Antitrust Litigation*, in 2001.⁹⁴

1. *Sun Microsystems, Inc.*

In one such action,⁹⁵ Sun Microsystems, Inc. ("Sun") accused Microsoft of selling modified versions of Sun's Java software that were unauthorized by a prior licensing agreement in violation of federal copyright and antitrust laws. Sun's motion for a preliminary injunction⁹⁶ was granted by the district court.⁹⁷ Citing the danger of monopolization of the middle-

90. See *January 2004 Joint Status Report*, *supra* note 82, at 14.

91. See *id.* at 12. Additionally, Microsoft recently launched anti-spam software as a part of its new Outlook program, which will potentially interfere with users' ability to use other anti-spam software. No formal action has been taken on this program, as it is outside the scope of the middleware-focused settlement.

92. 15 U.S.C. §15 (2000).

93. See *In re Microsoft Corp. Antitrust Litig.*, 232 F. Supp. 2d 534 (D. Md. 2002) (holding Microsoft collaterally estopped from relitigating facts found in the government antitrust suit that were relied upon to support the ultimate liability finding in that case); *United States v. Microsoft Corp.*, 84 F. Supp. 2d 9 (D.D.C. 1999).

94. See *In re Microsoft Corp. Antitrust Litig.*, 127 F. Supp. 2d 702, 704 (D. Md. 2001).

95. Microsoft also faces a private antitrust suit filed by Burst.com Inc. Burst is suing Microsoft for theft and anticompetitive behavior due to Microsoft's release of Corona, a technology for transmitting movies and sounds over the Internet quickly. This suit is still in the pretrial phase. See Associated Press, *Microsoft Sued Over Web Movie Technology*, BIZREPORT, Sep. 29, 2003, http://www.bizreport.com/print.php?art_id=5039; Microsoft Legal Update Antitrust Settlement Fact Sheet, Oct. 28, 2003, at <http://www.microsoft.com/presspass/legal/ca/10-28SettlementFS.asp>.

96. Preliminary injunctions for violations of the antitrust laws are allowed under § 16 of the Clayton Act. 15 U.S.C. § 26 (2000).

97. *In re Microsoft Corp. Antitrust Litig.*, 237 F. Supp. 2d 639 (D. Md. 2002).

ware market in violation of section 2 of the Sherman Act, the court ordered Microsoft to refrain from selling its own developments of Java that were not agreed upon in the licensing agreement, and to sell Sun's Java with its Windows OS.⁹⁸

The Fourth Circuit Court of Appeals reversed the portion of the injunction that required Microsoft to carry the Sun software.⁹⁹ The court found major deficiencies in Sun's argument that the middleware market was in immediate and certain danger of tipping in favor of Microsoft's .NET software at the expense of Sun's Java.¹⁰⁰ Expert testimony failed to unequivocally identify such immediate and certain danger.¹⁰¹ Moreover, the court rejected the argument that Microsoft was leveraging its market power in the operating system market into the middleware market, in part due to Sun's failure to properly define the middleware market.¹⁰² This flaw in Sun's case echoes the difficulties encountered by the *Microsoft III* plaintiffs in their unsuccessful effort to prove their claim of attempted monopolization of the web browser market.¹⁰³

Although it rejected the anti-monopolization injunction, the Fourth Circuit relied on copyright law in upholding the ruling prohibiting Microsoft from selling its own Java adaptations.¹⁰⁴ Microsoft remains enjoined from distributing modified Java because such distribution is outside the scope of the limited license Sun granted to Microsoft as part of a 2001 settlement agreement.¹⁰⁵

98. *Id.* at 640.

99. *In re Microsoft Corp. Antitrust Litig.*, 333 F.3d 517, 534 (4th Cir. 2003). The court considered "(1) the likelihood of irreparable harm to the plaintiff if the preliminary injunction [were] denied; (2) the likelihood of harm to the defendant if the injunction [were] granted; (3) the likelihood that the plaintiff [would] succeed on the merits; and (4) the public interest." *Id.* at 526.

100. *Id.* at 527-31.

101. *Id.* at 528.

102. *See id.* at 532-34.

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

104. *Microsoft*, 333 F.3d at 536.

105. Ultimately, the court's involvement in this case may prove irrelevant. Sun recently secured contracts with Acer, Gateway, Toshiba, Samsung Electronics, and Tsinghua Tongfang to install the latest version of Java's virtual machine, Java 2 Standard Edition, on computers sold by those OEMs. These contracts build upon the existing contracts Sun holds with Apple Computer, Hewlett-Packard, Dell, and Lindows.com. With these agreements, Sun will succeed in placing Java on at least half of PC desktops. This will likely be more effective than the copyright injunction affirmed by the Fourth Circuit in securing developers' access to the technology and keeping Sun from being pushed out of the middleware market.

2. Class Actions

When consolidating the private actions against Microsoft, the district court chose to hear one class action brought by software maker Gravity, Inc. separately because the complaint named multiple defendants.¹⁰⁶ On behalf of two classes of consumers,¹⁰⁷ Gravity, Inc. alleged conspiracies to restrain trade under Sherman Act section 1, and to monopolize, under Sherman Act section 2, between Microsoft and OEMs Dell, Compaq, and PB Electronics, Inc. The defendants allegedly exchanged restrictive licensing agreements for discounts and other benefits such as “greater cooperation from Microsoft in product development.”¹⁰⁸

In *Dickson v. Microsoft Corp.*, the Fourth Circuit affirmed the district court’s dismissal of the suit. The court granted Microsoft’s motion to dismiss¹⁰⁹ on the grounds that the “rimless wheel” conspiracy alleged by Gravity Inc. did not constitute a single conspiracy for purposes of the

106. In addition to the Gravity, Inc. suit, consumers have filed numerous state class actions and more than one hundred multidistrict class actions in federal court. Of these, suits in Colorado, Connecticut, Iowa, Kentucky, Maryland, Missouri, Nevada, New Hampshire, Oregon, Oklahoma, Rhode Island, and Texas, have been dismissed. Suits in California, the District of Columbia, Florida, Kansas, Montana, North Carolina, North Dakota, South Dakota, Tennessee, and West Virginia, have agreed upon settlements, and some have had these approved by the courts. On September 30, 2003, the federal multidistrict class action on behalf of direct purchasers of Windows settled after a June 2003 ruling that Windows specifications are not an essential facility, *In re Microsoft Corp. Antitrust Litigation*, No. MDL 1332, 2003 WL 21766566 (D. Md. 2003). Earlier, claims of indirect purchasers, foreign purchasers, and volume license customers were dismissed or refused class certification. See Microsoft Legal Update Antitrust Settlement Fact Sheet, *supra* note 95.

107. Class 1 consists of “United States purchasers . . . of Microsoft Windows or MS DOS operating software . . . installed and sold with personal computers compatible with Intel x86/Pentium architecture purchased directly from Compaq, Dell, or [PB Electronics].” *Dickson v. Microsoft Corp.*, 309 F.3d 193, 199 (4th Cir. 2002). Class 2 consists of “United States purchasers . . . of Microsoft word processing software and/or Microsoft spreadsheet software installed and sold with personal computers compatible with Intel x86/Pentium architecture purchased directly from Compaq, Dell, or [PB Electronics].” *Id.*

108. *Id.* at 199 (quoting *Gravity Inc. v. Microsoft Corp.*, 127 F. Supp. 2d 728, 732 n.5 (D. Md. 2001)). The complaint argued that the licensing agreements contained:

- (1) a prohibition against removing icons, folders, or Start menu entries from the Windows desktop;
- (2) a prohibition against modifying the initial Windows boot sequence;
- (3) the integration of Internet Explorer (IE) . . . and other application software with the Microsoft operating software;
- (4) the inclusion of long-term distribution contracts, exclusive dealing distribution arrangement, and per-processor license fees.

Dickson, 309 F.3d at 199.

109. See FED. R. CIV. PROC. 12(b)(6).

Sherman Act. Furthermore, the two separate agreements between Microsoft and each of the OEMs did not impose "unreasonable restraints of trade in interstate commerce."¹¹⁰ The court held that Gravity could not rely on the combined market power of the OEMs because it could not demonstrate a connection between them that would warrant their consideration as a single conspiracy.¹¹¹ The court added that even if individual OEMs possessed market power sufficient to impose an unreasonable restraint of trade, Gravity's suit would still be restricted by the indirect purchaser rule.¹¹² That rule bars consumers who purchase goods through an intermediary from recovering for supra-competitive prices, caused by the original seller's anticompetitive conduct, that are supposedly passed on by the intermediary.¹¹³

In so holding, the court read narrowly the conspiracy exception to the indirect purchaser rule. Gravity asserted that the rule is inapplicable where the plaintiff has alleged any conspiracy, while the court interpreted existing cases as holding that only price-fixing conspiracies could trigger the exception.¹¹⁴ Gravity did not specifically plead price fixing, but rather took issue with the agreements between Microsoft and the OEMs on several levels, the cumulative result of which was to raise prices for consumers. After denying Gravity's claims of conspiracy and market power, the court signaled that indirect purchasers would face difficulty trying to circumvent the indirect purchaser rule in the Fourth Circuit.¹¹⁵

110. *Dickson*, 309 F.3d at 205.

111. *Id.* at 204-05.

112. *Id.* at 214.

113. *See Illinois Brick Co. v. Illinois*, 431 U.S. 720 (1977). The *Illinois Brick* Court held that only direct purchasers from an antitrust violator can sue for damages under the Sherman Act, citing avoidance of multiple overlapping recoveries against the original seller by direct and indirect purchasers, and avoidance of uncertainties that may arise in determining how much of an overcharge was passed on to the end purchaser through the intermediary. *See id.* at 728-748. In an earlier ruling in the *In re Microsoft* consolidated action, the district court judge ruled that consumers who obtained their Microsoft software via a purchase of a PC were barred from suing Microsoft for overcharges passed on by OEMs under *Illinois Brick*. *See In re Microsoft Corp. Antitrust Litig.*, 127 F. Supp. 2d 702 (D. Md. 2001).

114. *Dickson*, 309 F.3d at 214-15.

115. *See id.* at 216.

II. EUROPEAN DEVELOPMENTS

The European Commission has been investigating Microsoft for five years, probing its behavior through a more active, regulatory lens.¹¹⁶ Perhaps as a reaction to American authorities' retreat from the most pervasive remedy, the dismantling of the company, the European Commission appears poised to crack down on Microsoft's server software and media player sales practices. The investigation was prompted by a complaint by Sun Microsystems that Microsoft would not disclose protocols for Windows NT. The E.C. expanded its investigation in 2001, to examine how Microsoft's Windows Media Player has affected the streaming media technology market.

A. Overview of European Competition Law

Articles 81 and 82¹¹⁷ of the EC Treaty govern competition in the European market. Article 81 addresses anticompetitive agreements among undertakings (corporations), while article 82 regulates unilateral anticompetitive behavior, such as tying, refusals to license, and anticompetitive enforcement of intellectual property rights.¹¹⁸ While articles 81 and 82 appear to be similar to sections 1 and 2 of the Sherman Act, there are impor-

116. This is not the first European Microsoft inquiry. In the mid-1990s, the E.C. probed Microsoft's licensing practices in conjunction with the DOJ, eventually imposing injunctions on Microsoft's conduct. See Justin O'Dell, *Trouble Abroad: Microsoft's Antitrust Problems Under the Law of the European Union*, 30 GA. J. INT'L. & COMP. L. 101, 106 (2001).

117. Article 82 (formerly Article 86 of the Treaty of Rome) reads:

Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market in so far as it may affect trade between member-States. Such abuse may, in particular, consist in:

- (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
- (b) limiting production, markets or technical development to the prejudice of consumers;
- (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

Treaty Establishing the European Community, Nov. 10, 1997, O.J. (C 340) 1 (1997), art. 82 [hereinafter EC TREATY].

118. HERBERT HOVENKAMP, ET AL., *IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW* § 45.3.b (2003).

tant differences in approach.¹¹⁹ For example, American courts use the rule of reason to determine whether a restraint of trade violates the Sherman Act. Under European law, by contrast, an agreement that has as its "object or effect the . . . distortion of competition,"¹²⁰ however reasonable, is in violation of article 81 unless it qualifies for an exemption under article 81(3).¹²¹

In Europe, competition policy has economic, political, and social goals.¹²² Beyond efficient production, the European Community seeks to fulfill the obligations of the European treaties, such as "establishing a common market, approximating economic policies, promoting harmonious growth, raising living standards, [and] bringing Member States closer together"¹²³ The overall political goal of maintaining a pluralistic democracy necessitates sharp controls on concentrations of economic power.¹²⁴ The broad social welfare approach to competition law in Europe exercises policy "as a tool that can be used to fulfill the broader objectives behind establishing a common market."¹²⁵ In Europe, Microsoft faces a tribunal largely unsympathetic to the principal American antitrust objective, which is strictly consumer welfare-centered and *pro-competition*, rather than *pro-competitor*.

119. *Id.*

120. EC TREATY, *supra* note 117, art. 81(1) (ex. art. 85).

121. HOVENKAMP, ET AL., *supra* note 118, §45.3.b. Article 81(3) states:

The provisions of paragraph 1 may, however, be declared inapplicable in the case of:

- any agreement or category of agreements between undertakings;
- any decision or category of decisions by associations of undertakings;
- any concerted practice or category of concerted practices; which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not:
 - (a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives;
 - (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.

EC TREATY, *supra* note 117, art. 81(1).

122. Bryan A. Facey & Dany H. Assaf, *Monopolization and Abuse of Domination in Canada, the United States and the European Union: a Survey*, 70 ANTITRUST L.J. 513, 527 (2002).

123. *Id.*

124. *Id.*

125. *Id.* at 528.

B. Pending Actions

The European Commission is considering two practices largely overlooked by the U.S. DOJ: creation of PC software that requires Microsoft server software to achieve full interoperability; and the tying of Windows Media Player to the Windows PC operating system.¹²⁶ Prompted by a complaint by Sun Microsystems, European investigators examined the interaction within desktop-server program pairings such as Microsoft Access and Microsoft SQL Server.¹²⁷ Microsoft Access is incapable of sharing a database with more than fifty users unless it is used in conjunction with Microsoft SQL Server; the Commission wants Microsoft to disclose interface information that would allow other makers of workgroup server operating systems to achieve this synergy with Microsoft desktop software. The current interoperability problem prompts consumers to purchase Microsoft products for both desktop and server. Furthermore, the Commission believes Microsoft's Windows 2000 licensing policy may have been an illegal exercise of the company's market dominance because customers using competing server products, instead of the all-inclusive Microsoft PC-server package, paid twice the price.¹²⁸

In addition to the server software investigation prompted by Sun's complaint, the Commission initiated its own inquiry into Microsoft's bundling of Windows with the Windows Media Player, alleging that the practice weakens competition on the merits, stifles innovation, and reduces consumer choice.¹²⁹ Due to the program's presence on a large majority of PC's, software developers and content providers are more inclined to develop for the Windows Media Player. Although RealNetwork's RealPlayer, Apple's QuickTime, and other competitors are found on over three quarters of the world's personal computers, they are generally the second audio/video player on the machine. The E.C. worries that the presence of Windows Media Player on all Windows machines will continue to

126. See Commission Gives Microsoft Last Opportunity to Comment Before Concluding its Antitrust Probe, IP/03/1150, Aug. 6, 2003 [hereinafter *Statement of Objections*], at http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/03/1150|0|RAPID&lg=EN.

127. See Paul Meller, *New Antitrust Charges Brew: European Union Considers New Complaints That Microsoft Abuses Monopoly Power*, PCWORLD.COM, IDG NEWS SERV., Nov. 15, 2002, at <http://www.pcworld.com/news/article/0,aid,10699500..>

128. *Technology: Commission Launches New Microsoft Probe*, EUR. INFO. SERV. EUR. REP., Nov. 1, 2003.

129. *Statement of Objections*, *supra* note 126.

dictate development regardless of inroads made by an array of competitors.¹³⁰

Besides these nearly completed investigations, the E.C. announced the beginning of another inquiry on October 30, 2003, this time into Microsoft's licensing policy regarding hardware groups that may restrict hardware makers' ability to enforce their own software patents.¹³¹ Other concerns not yet under formal investigation include price increases for Windows upgrade licensing,¹³² leveraging of power in the operating system market into the market for mobile phone software,¹³³ and predatory pricing aimed at retarding the growth of GNU/Linux in developing markets.¹³⁴ Emails retrieved from Microsoft managers reveal that Microsoft draws from a special fund to steeply discount software in order to complete difficult sales.¹³⁵ Although discounting is permissible under European law, a company with market power like Microsoft's cannot discount its products to discourage or prevent entry into the market by rival firms.¹³⁶

The Commission issued its third and final Statement of Objections for its present investigations on August 6, 2003, giving Microsoft a final chance to comment within the next two months before a ruling came down on either the server software or Windows Media Player inquiries.¹³⁷ In subsequent hearings on the matter, Microsoft warned that rewriting the Windows operating system to remove Media Player would result in a sub-standard Windows version.¹³⁸ Competitors such as RealNetworks responded by demonstrating that Windows XP Embedded, a version of Windows without Media Player, functions properly.¹³⁹ Microsoft replied

130. Paul Meller & Joris Evers, *European Commission Threatens Microsoft*, PCWORLD.COM, IDG NEWS SERV., Aug. 6, 2003, at <http://www.pcworld.com/news/article/0,aid,111921,00.asp>.

131. *Technology: Commission Launches New Microsoft Probe*, *supra* note 128.

132. See Written Question E1823/02 by Erik Meijer, 2003 O.J. (C 92) 95 (charging that Microsoft has done away with 50% discounts on upgrades and charges high prices for the option to get a discounted upgrade, leaving businesses stranded with outdated software), <http://europa.eu.int/eurlex/pri/en/oj/dat/2003/ce092/ce09220030417en00950096.pdf>.

133. Meller, *supra* note 127.

134. Thomas Fuller, *How Microsoft Warded Off Rival*, N.Y. TIMES, May 15, 2003, <http://news.com.com/2100-1016-1001845.html> (last visited Dec. 18, 2003).

135. *Id.*

136. See EC TREATY, *supra* note 117, art. 82.

137. See *Statement of Objections*, *supra* note 126.

138. Reuters, *Microsoft Warns EU Rewrite Would Be Inferior*, CNET NEWS.COM, Nov. 13, 2003, at <http://news.com.com/2100-1016-5106777.html>.

139. Reuters, *Microsoft Rivals: Modified OS Isn't Mediocre*, ZDNET NEWS, Nov. 14, 2003, at <http://zdnet.com.com/2100-1104-5107673.html>.

that the Embedded version of Windows is intended only for developers and is not licensed for use on regular computers.¹⁴⁰

In January 2004, the Commission announced it had drafted its decision, finding Microsoft liable for both its Media Player activity and its server software nondisclosure.¹⁴¹ The Commission plans to issue its final ruling before May 1, 2004, leaving Microsoft little time to negotiate a settlement.¹⁴²

C. European Remedies

Fortunately for Microsoft, the sanctions drawn by a violation of article 82 do not include structural remedies, like divestiture.¹⁴³ The European Commission can order violators to cease the illegal conduct, and may impose monetary fines and conduct-related penalties.¹⁴⁴ Remedies proposed by the Commission in this case include requiring Microsoft to disclose interface information for its server products, and forcing Microsoft to sell the Windows operating system without Windows Media Player.¹⁴⁵ Alternatively, the Commission has considered a remedy like the one rejected by the Fourth Circuit in the Sun's suit against Microsoft,¹⁴⁶ namely to require Microsoft to sell competing media software with Windows.¹⁴⁷ However, this must-carry injunction would be difficult to implement, as any choice of an alternative player to bundle with Windows would give an unfair advantage to one of the competitors and enforcement would be difficult.

In addition to these injunctive remedies, the Commission may levy a fine of up to ten percent of Microsoft's annual global revenue—U.S.\$3 billion.¹⁴⁸ If it receives an adverse ruling from the Commission, Microsoft can appeal first to the European Court of First Instance in Luxembourg, then appeal further questions of law to the European Court of Justice. Although the Commission has never levied a fine of ten percent of a com-

140. *Id.*

141. *EU's Mind 'Made Up' on Microsoft*, BBC NEWS, at <http://news.bbc.co.uk/1/hi/business/3432735.stm> (last updated Jan. 27, 2004).

142. *Id.*

143. Facey & Assaf, *supra* note 122, at 576.

144. *Id.*

145. *Statement of Objections*, *supra* note 126.

146. See discussion of Sun's suit against Microsoft, see *supra* Part I.C.1.

147. *Statement of Objections*, *supra* note 126.

148. *Id.*

pany's revenue, it has also never dealt with anticompetitive behavior on as large a scale as that which Microsoft allegedly committed.¹⁴⁹

In its January 2004 preliminary decision on liability, the Commission did not indicate how large a fine it will impose, but suggested conduct remedies requiring Microsoft to strip Media Player from Windows and disclose its server communications protocols to competitors.¹⁵⁰

III. ANALYSIS

The Microsoft cases underscored the limitations of traditional antitrust doctrine and spurred the development of new enforcement institutions tailored to high-technology industries. Even so, market forces may win the race to check Microsoft's monopoly power.

A. Shortcomings of Traditional Antitrust Doctrine

The two private suits discussed in Part II.C highlight how traditional antitrust doctrine at times does not properly account for the realities of high-technology markets. In Sun's suit against Microsoft, the court denied Sun's request for a preliminary must-carry injunction, and would not have enjoined Microsoft from distributing its own "polluted Java" if the practice did not violate copyright law.¹⁵¹ The court rejected Sun's attempt to show the requisite irreparable harm by pointing to future harm it would suffer through market tipping.¹⁵² By demanding a showing of more immediate harm,¹⁵³ the court ignored the fact that inaction in this case favored Microsoft by allowing the number of applications written specifically for Microsoft's Java to grow.

In *Dickson v. Microsoft*,¹⁵⁴ the application of traditional antitrust doctrine once again produced undesirable results. Because most consumers of Windows obtain the product via a PC purchase, they are relegated to the indirect purchaser realm, where they must wait for the direct purchasers

149. Paul Meller, *Guilty Ruling Likely in EU's Antitrust Case*, PCWORLD.COM, IDG NEWS SERV., Mar. 12, 2003, at <http://www.pcworld.com/resource/printable/article/0,aid,109795,00.asp> (quoting a source "close to the European Commission's competition department" as stating that "[the Commission] has never come near to such a colossal antitrust case").

150. *EU's Mind 'Made Up' on Microsoft*, *supra* note 141.

151. *In re Microsoft Corp. Antitrust Litig.*, 237 F. Supp. 2d 639, 642 (D. Md. 2002).

152. Market tipping refers to the tendency of a market exhibiting feedback effects (the utility of a product increasing with the number of people using it) to be dominated by the supplier that first achieves substantial distribution of its product. *See id.* at 646.

153. *See id.* at 651-53.

154. 309 F.3d 193 (4th Cir. 2002)

(the OEMs) to obtain relief on their behalf. Plaintiff Gravity Inc. took the view that consumers should be allowed to sue directly, under the conspiracy exception to the indirect purchaser rule. Gravity's approach makes sense in the software market, as Microsoft and its OEMs maintain ongoing relationships via licensing agreements that easily allow for coordination of prices, even after the implementation of the consent decree's nondiscriminatory licensing requirements. These facilitating practices need to be open to investigation, and the consumers are the only parties in the equation who will pursue an inquiry. The Fourth Circuit identified a split among the circuits as to the interpretation of the conspiracy exception;¹⁵⁵ future software purchasers will greatly benefit if this conflict is resolved in favor of a liberal reading.

B. New Approaches to Antitrust Enforcement

Over the course of the enforcement actions against Microsoft, new approaches to antitrust enforcement have developed that lay the groundwork for future high technology antitrust enforcement. The consent decree compliance process and the global approach to antitrust serve the heightened demands of complex, rapidly-changing industries.

1. Regulation via Consent Decree

The present government enforcement procedure represents continuation of a growing trend of antitrust regulation through consent decrees.¹⁵⁶ Although Microsoft maintained its operating systems monopoly illegally, it initially obtained that monopoly through legal business practices. A structural remedy to remove that power would be contrary to the policy of the U.S. antitrust laws to avoid sanctioning success in business achieved via a superior product, exceptional business acumen, or good luck. So, even though the government plaintiffs do not intend to become regulators—in defending the shortened five-year term of the consent decree in Microsoft III, the government cited the risk that a ten-year term would allow the decree to become “highly regulatory”¹⁵⁷—the enforcement of less

155. See *id.* 214-15.

156. See Michael P. Kenny & William H. Jordan, *United States v. Microsoft: Into the Antitrust Regulatory Vacuum Missteps the Department of Justice*, 47 EMORY L.J. 1351, 1353 (1998) (noting that the antitrust consent decree is “a public settlement process that the [U.S. DOJ Antitrust] Division now employs in a majority of its civil cases”); Michael L. Weiner, *Antitrust and the Rise of the Regulatory Consent Decree*, 10 ANTITRUST 4, 4 (1995) (“Consent decree settlements resolving . . . Antitrust Division challenges to proposed acquisitions and other conduct are now much more the rule than the exception.”).

157. *United States v. Microsoft Corp.*, 231 F. Supp. 2d 144, 194 (D.D.C. 2002).

stringent conduct remedies in this case will require technical expertise and diligent monitoring costing many hours and dollars.

The consent decree can be a valuable timesaving tool, allowing the defendant to begin correcting its behavior years earlier than if a case were litigated to finality. It puts negotiations about remedies behind closed doors, however, which allows government attorneys and private parties to set quasi-precedents in antitrust law regarding the appropriate remedies for different degrees of misconduct. In this case, because the facts and liability were decided in court, the consent decree was based on the adversarial process, which somewhat blunts criticism that the executive branch is creating antitrust doctrine in place of the courts.¹⁵⁸ Also, the Tunney Act public comment process adds further legitimacy. The regulation of Microsoft in this manner is thus the best approach to remedy the abuses found, as the government is not only concerned about what exclusionary acts Microsoft performed in the past, but also about potential misuse of its power in the future.

The compliance process will provide a model for future high-technology antitrust actions that need to impose complex but flexible conduct remedies. Critics have warned that the flexible and open-ended consent decree, designed to allow the decree to remain effective as technology changes, provides large loopholes that Microsoft will exploit.¹⁵⁹ While the initial settlement prompted charges that the Bush Administration had unnecessarily backed down from imposing appropriately stringent remedies, however, the state attorneys general assisting in the consent decree compliance process will reinforce the U.S. DOJ's efforts to ensure that Microsoft remains diligently monitored. The technical committee ensures that a neutral body will decide quickly whether a particular act is technologically necessary or an attempt to circumvent the decree's provisions. Moreover, Microsoft's business practices are under constant scrutiny and a forum for complaints is always open to identify and address future bad acts by the company. Regardless of the terms of the consent decree, future enforcement actions may imitate the compliance process of *Microsoft III* to effect this valuable supervision.

158. In 1997, Nathan Myhrvold, Microsoft's Chief Technology Officer, observed, "The specter here is of a Federal Bureau of Operating Systems." See Steve Lohr, *Unbundling Microsoft*, N.Y. TIMES, Dec. 13, 1997, at A1.

159. See, e.g., *New York v. Microsoft Corp.*, No. 98-1233 (CKK), 2002 WL 31961461 (D.D.C. Nov 01, 2002), *appeal docketed sub nom. Massachusetts v. Microsoft Corp.*, No. 02-7155, (D.C. Cir. Nov. 4, 2003); Bresnahan, *supra* note 50.

2. *Global Antitrust Enforcement*

Antitrust actions against Microsoft have accelerated the development of global antitrust enforcement procedures due to the trans-jurisdictional effects of the conduct at issue.¹⁶⁰ The so-called “spillover” of network effects¹⁶¹ from Europe to the United States and vice versa necessitates that each jurisdiction make companies play by the same antitrust rules. Otherwise, if Microsoft is allowed to carry out anticompetitive acts to stunt the development of competitors’ middleware in Europe, an enforcement action in the United States has little meaning; the company’s European customer base and corresponding value of the operating system and applications barrier to entry would continue to grow. In *Microsoft I*, the U.S. DOJ found that the E.C. was investigating the same business practices, and the two bodies were able to coordinate their investigations and settlements.¹⁶² The results of the coordinated enforcement were more effective than two individual investigations would have been.¹⁶³ This coordination was only possible, however, because Microsoft requested a single settlement procedure and waived its right to retain the confidentiality of the documents it produced, as was its right under the laws of both Europe and the United States.¹⁶⁴

At present, the E.C. is poised to find Microsoft liable for practices not included in the American enforcement action, and no coordination is in sight, threatening to undermine the European case. It is possible that any remedies imposed by the E.C. will affect the U.S. market without any formal coordination. In a similar situation in 1984, to avoid a formal mandate from European antitrust regulators, IBM agreed to disclose interface information before a new product became generally available, and within four months of announcing the new product.¹⁶⁵ Also, IBM was required to unbundle peripheral equipment from its mainframes.¹⁶⁶ The U.S. DOJ had dropped its marathon antitrust case against IBM by that time, but the European remedies effectively became global: any disclosures made in Europe would quickly spread to the United States, and unbundled IBM

160. See Joel Klein & Preeta Bansal, *International Antitrust Enforcement in the Computer Industry*, 41 VILL. L. REV. 173, 179-80 (1996).

161. See *id.*

162. *Id.* at 179.

163. See *id.*

164. See *id.* at 185.

165. See *Int’l Bus. Machs. Corp. v. Comm’n*, Case 60/81 [1981] E.C.R. 2639 (C.J.); *Int’l Bus. Machs. v. Comm’n*, Case 60/81 [1981] E.C.R. 1857 (C.J.); F.M. Scherer, *Microsoft and IBM in Europe*, ANTITRUST & TRADE REG. REP., Vol. 84, No. 2090, at 65-66 (Jan. 24, 2003).

166. Scherer, *supra* note 165.

mainframes could enter the American market. A conduct remedy such as a requirement that Microsoft disclose extensive server interface information would have a similar global information effect. Likewise, an injunction requiring the unbundling of Windows Media Player could force Microsoft to restructure its sales strategy in the United States. Because American consumers would have the option to purchase Windows free of the Media Player from European sources, it would be difficult for the company to justify why that version was unavailable directly in the U.S.¹⁶⁷

In the long term, however, the joint action used in *Microsoft I* will provide the most durable, thorough corrections of market distortions caused by anticompetitive behavior. Because many consumers are not aware of the larger effects of the bundling of Windows Media Player, many may not know to seek out the pared down version of Windows, especially when it is highly likely that any PC purchased by consumers will have the bundled version of Windows installed. Content providers understand this and will continue to tailor content to Windows Media Player. Likewise, if the European remedy entails mandatory individual licensing of the server interfaces, it is unclear whether American companies would be able to obtain the information. In future high-technology antitrust cases, the United States and the E.C. would be better served by deliberately coordinating enforcement.

C. Beyond Antitrust Laws, Economic Forces Govern

Regardless of the legal actions against it, Microsoft may have to alter its business practices due to domestic and foreign market developments. Domestically, IBM, Red Hat, and an industry GNU/Linux consortium called Open Source Development Labs are backing a strong push to put GNU/Linux onto desktops.¹⁶⁸ That decision reflects the realization that GNU/Linux providers can compete with Microsoft by showing how much consumers will save in maintenance, troubleshooting, and security costs with its program. This is especially important in the corporate market, where around seventy percent of a PC's cost is attributable to security and support issues.¹⁶⁹ Even outside the corporate market, the Microsoft anti-

167. The effects of the European action in regard to Media Player appear already to have spread to the United States. On December 18, 2003, Real Networks Inc., maker of RealPlayer, a rival of Windows Media Player, sued Microsoft, charging that, by bundling Media Player with Windows, Microsoft is illegally monopolizing the digital media market. See Richard Waters & Scott Morrison, *Microsoft Faces New Antitrust Battle*, FIN. TIMES, Dec. 19, 2003, at 1.

168. Stephen Shankland, *Austin Tests Desktop Linux Waters*, CNET NEWS.COM, Dec. 19, 2003, at http://news.com.com/2100-7344_3-5130142.html?tag=mainstry.

169. Steve Lohr, *I.B.M. Helps Promote Linux*, N.Y. TIMES, Nov. 11, 2003, at C6.

trust actions may cause greater consumer awareness of the relative shortcomings of Microsoft software, which might prompt demand for alternative software and operating systems.

Abroad, places where the network effects of Windows are not controlling will give the United States a glimpse of how Microsoft should be acting in a competitive market, which may influence how the company's conduct is monitored in the future. In China, the price of Microsoft Office amounts to a months' salary for an average office worker,¹⁷⁰ so users turn to GNU/Linux for a free operating system and open source code. These characteristics translate into free applications and the ability to adapt software to meet local needs. The Thai government is providing subsidized PCs to its citizens and, until Microsoft made an exception to its pricing policy to put Windows on some of the PCs, equipped them solely with Linux.¹⁷¹ Moreover, governments of developing countries that purchase applications will prefer to buy from local software developers that use open source code rather than sending money out of the country to Microsoft.¹⁷² Competition in a market where Microsoft is less dominant may yield results very different than those observed in the United States.

Even in markets more saturated with Microsoft products, governments are willing to abandon Windows in search of lower costs. In May 2003, the City of Munich, Germany, switched 14,000 desktop machines used by city workers to GNU/Linux, citing cost concerns and a desire for freedom from reliance on a single provider.¹⁷³ The City of Austin, Texas, is testing GNU/Linux as well as OpenOffice, an open source competitor of Microsoft Office, for similar reasons.¹⁷⁴ Interoperability likely becomes less significant when an entire organization converts, as most file exchange and networking is probably internal. The U.K. National Health Service (NHS), one of Microsoft's largest U.K. clients, has made a deal with Oracle for its nationwide database on a "country wide," rather than per-user agreement, resulting in significant projected savings over the ten-year license term.¹⁷⁵ The NHS used the Oracle deal to pressure Microsoft to offer a similar "enterprise wide" licensing arrangement for its operating system and applica-

170. Craig S. Smith, *China Moves To Cut Power Of Microsoft*, N.Y. TIMES, July 8, 2000, at A1.

171. David Becker, *Governments Vote Against Microsoft*, CNET NEWS.COM, Jan. 22, 2004, at http://news.com.com/2100-7344_3-5145332.html?tag=mainstry.

172. *Id.*

173. Stephen Shankland, *Munich Breaks with Windows for Linux*, CNET NEWS.COM, May 28, 2003, at http://news.com.com/2100-1016_3-1010740.html?tag=bpplst.

174. Shankland, *supra* note 168.

175. Nicholas Timmins, *NHS Database Deal Puts Pressure on Microsoft to Cut Prices*, FINANCIAL TIMES, Jan. 27, 2004, at 4.

tions.¹⁷⁶ The NHS is already considering switching its computers to GNU/Linux, and using Sun's StarOffice, because its users do not need the wealth of features that come with Microsoft's applications, along with a higher price.¹⁷⁷ It remains to be seen whether the business world, the core of Microsoft's customer base, will follow suit. A shift in the platform standard to GNU/Linux would deflate the market power Microsoft enjoys due to network externalities that enhance the demand for Windows. If consumers are no longer compelled by interoperability concerns to purchase Windows, the operating system will have to compete based on price and quality, which, ultimately, is the goal of antitrust enforcement.

IV. CONCLUSION

Nearly all of the Microsoft antitrust litigation has run its course, and in the process has demonstrated that traditional antitrust litigation is too slow and myopic (focused on past harms) to deal with antitrust violations in high-technology industries. As a result, the consent decree and international cooperation have emerged as methods for achieving more rapid, yet more lasting and pervasive remedies. The next round of doctrinal development will center on how to best implement the regulatory consent decree to monitor industries that move too quickly for traditional enforcement mechanisms. In addition, international high-technology antitrust cooperation must develop more fully to bridge present differences between the American and European approaches that can produce anomalous results. As technology shifts away from the present platform software approach, these tools for maintaining robust competition will spare the government the need to interfere early in the standardization process in the effort to ensure that the best new product wins.

176. *Id.*

177. *Id.*