court concludes: (1) IRS's motion for protective order preventing Landmark from taking the deposition of Harold Toppall should be denied; (2) IRS's motions for protective orders preventing Landmark from taking a 30(b)(6) deposition and the depositions of Thomas Miller and Donald Squires should be granted; and (3) Landmark's motion to compel production of documents and for costs should be denied.

Accordingly, it is, this 9th day of March 2000, hereby

ORDERED that the IRS's motion for protective order to prevent Landmark from taking the deposition of Harold Toppall (Doc. # 82) is **DENIED**; it is further

ORDERED that the deposition of Harold Toppall shall be completed within 4 hours; it is further

ORDERED that the IRS's motions for protective orders to prevent Landmark from taking the deposition of its 30(b)(6) deponent(s) (Doc. # 83) and the depositions of Thomas Miller and Donald Squires (Doc. # 82) are **GRANTED**; and it is further

ORDERED that Landmark's motion to compel production of documents and for costs (Doc. # 85) is **DENIED**.

UNITED STATES of America, Plaintiff,

v.

MICROSOFT CORPORATION, Defendant.

State of New York, et al., Plaintiffs,

v.

Microsoft Corporation, Defendant.

Microsoft Corporation, Counterclaim–Plaintiff,

Eliot Spitzer, attorney general of the State of New York, in his official capacity, et al., Counterclaim–Defendants.

Civil Action Nos. 98–1232 (TPJ), 98–1233 (TPJ).

United States District Court, District of Columbia.

April 3, 2000.

Bench trial was held in consolidated state and federal civil antitrust action against manufacturer of personal computer (PC) operating system (OS) and Internet web browser. After issuing its findings of fact, 84 F.Supp.2d 9, the District Court, Jackson, J., held that: (1) defendant maintained its monopoly power in OS market by anticompetitive means; (2) defendant attempted to monopolize web browser market; (3) defendant's bundling of its OS and web browser constituted illegal tying arrangement; but (4) defendant's agreements with Internet service providers (ISPs), Internet content providers (ICPs), independent software developers, and PC manufacturers to distribute and promote defendant's web browser to exclusion of competing browser did not constitute unlawful exclusive dealing arrangements.

So ordered.

1. Monopolies ⚷12(1.3)

A firm violates § 2 of the Sherman Act if it attains or preserves monopoly power through anticompetitive means; this requires a court to ascertain the boundaries of the commercial activity that can be termed the "relevant market" and then assess the defendant's actual power to control prices in, or to exclude competition from, that market. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

2. Monopolies ⚷12(1.3)

The determination of whether a zone of commercial activity actually qualifies as a relevant market, the monopolization of which might be illegal, depends on whether that zone includes all products reasonably interchangeable by consumers for the same purposes.

3. Monopolies ⚷28(7.1)

Proof of manufacturer's dominant market share in personal computer (PC) operating system (OS) market together with proof of substantial barriers to effective entry into market created presumption that manufacturer enjoyed monopoly power in PC OS market. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

4. Monopolies ⚷28(7.5)

Even if manufacturer of personal computer (PC) operating system (OS) rebutted presumption of monopoly power that arose from its dominant market share and existence of substantial barriers to entry, evidence that original equipment manufacturers (OEMs) had no commercially alternative to licensing defendant's OS for pre-installation on their PCs, and evidence of behavior on part of defendant that would be rational for profit-maximizing firm only if it knew it possessed monopoly power was sufficient to establish that manufacturer enjoyed monopoly power in relevant market. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

5. Monopolies ⚷12(1.2)

Threshold question in determining whether conduct used by firm to maintain monopoly power was "anticompetitive" is whether firm's conduct was exclusionary in that it restricted significantly, or threatened to restrict significantly, ability of other firms to compete in relevant market on merits of what they offered to customers; if evidence reveals significant exclusionary impact in relevant market, then defendant's conduct will be labeled "anticompetitive" and liability will attach, unless defendant comes forward with specific, procompetitive business motivations that explain full extent of its exclusionary conduct. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

See publication Words and Phrases for other judicial constructions and definitions.

6. Monopolies ⚷12(1.6)

Proof that an antitrust defendant's conduct was motivated by a desire to prevent other firms from competing in the relevant market based on the merits of their product can contribute to a finding that the conduct had, or would have, the intended, exclusionary or anticompetitive effect, for purposes of determining whether the defendant used anticompetitive means to maintain monopoly power. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

7. Monopolies ⚷12(1.6)

If a firm with monopoly power consciously antagonizes its customers by making its products less attractive to them, or if it incurs other costs, such as large outlays of development capital and forfeited opportunities to derive revenue from it, with no prospect of compensation other than the erection or preservation of barriers against competition by equally efficient firms, that conduct may be deemed "predatory." Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

See publication Words and Phrases for other judicial constructions and definitions.

8. Monopolies ⚷12(1.2)

Predatory behavior is patently anticompetitive, and proof that a firm with monopoly power engaged in such behavior necessitates a finding of liability under § 2 of the Sherman Act. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

9. Monopolies ⚷12(1.3, 2)

Manufacturer of personal computer (PC) operating system (OS) and Internet web browser maintained its monopoly power in OS market through anticompetitive means by preventing middleware technologies, in form of competing web browser and "Java" programming language, from fostering development of cross-platform and network-centric applications that would run on variety of OSs, not just defendant's OS, and thereby erode barriers to entry in OS market; defendant acted to decrease competing web browser's market share, making it less likely that developers would use competing browser platform to write cross-platform applications, by refusing to license its OS to original equipment manufacturers (OEMs) without its web browser, prohibiting OEMs from modifying its OS to allow installation of competing browser, entering into agreements with Internet service providers (ISPs), Internet content providers (ICP), independent software developers, and computer manufacturers requiring them to distribute and promote defendant's browser to exclusion of competing browser, and defendant thwarted development of cross-platform applications based on "Java" programming language by creating its own version of language, for use with its OS, that undermined portability of language and was incompatible with other implementations of language. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

10. Monopolies ⚷12(5)

Personal computer (PC) operating system (OS) and Internet web browser manufacturer's copyright in its OS did not immunize it from antitrust liability arising from restriction it placed on original equipment manufacturers (OEMs) that prevented them from reconfiguring or modifying defendant's OS, which was bundled with defendant's browser, so that competing browser could be installed; true impetus behind restriction was not desire to maintain integrity of OS, and modifications OEMs desired to make would not have altered any of defendant's application programming interfaces (APIs) nor disrupted any of OS's functionalities. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

11. Monopolies ⚷12(5)

A copyright holder is not by reason thereof entitled to employ the perquisites in ways that directly threaten competition.

12. Monopolies ⚷12(1.3, 1.6)

In order for liability to attach for attempted monopolization, the plaintiff generally must prove that: (1) the defendant engaged in predatory or anticompetitive conduct; (2) the defendant engaged in the conduct with a specific intent to monopolize; and (3) there was a dangerous probability that the defendant would succeed in achieving monopoly power. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

13. Monopolies ⚷12(1.8)

Defendant manufacturer of personal computer (PC) operating system (OS) and Internet web browser was liable for attempting to monopolize web browser market, even though defendant sought to minimize competing browser's market share in order to maintain its monopoly power in OS market by preventing development of cross-platform applications; defendant asked competitor to stop developing platform-level browser software for 32-bit versions of defendant's OS with full knowledge that competitor's acquiescence in market allocation scheme would endow defendant with de facto monopoly power in browser market, after competitor refused to abandon development of 32-bit browser, defendant sought to minimize competitor's market share by maximizing its own share of browser market, and, at time defendant proposed market allocation scheme, there

was dangerous probability of achieving monopoly power, since nearly all of competitor's 70% market share would have devolved to defendant and, in time it would have taken new competitor to enter browser market, defendant could have erected barriers to entry. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

14. Monopolies ⚷12(1.3, 2)

Anticompetitive conduct used by manufacturer of Internet web browser to increase its market share to over 50% of browser market satisfied requirement, for imposing liability for attempted monopolization, that there was dangerous possibility that defendant would succeed in achieving monopoly power. Sherman Act, § 2, as amended, 15 U.S.C.A. § 2.

15. Monopolies ⚷17.5(2)

An antitrust defendant will be liable based on a tying arrangement if: (1) two separate products are involved; (2) the defendant affords its customers no choice but to take the tied product in order to obtain the tying product; (3) the arrangement affects a substantial volume of interstate commerce; and (4) the defendant has market power in the tying product market. Sherman Act, § 1, as amended, 15 U.S.C.A. § 1.

16. Monopolies ⚷17.5(13)

A software manufacturer's personal computer (PC) operating system (OS) and Internet web browser were separate products, for purposes of determining whether their bundling by the manufacturer constituted an illegal tying arrangement, even though the software code supplying their discrete functionalities could be commingled in virtually infinite combinations, rendering each indistinguishable from the whole in terms of files of code or any other taxonomy; the commercial reality was that consumers perceived OSs and browsers as separate products for which there was separate demand. Sherman Act, § 1, as amended, 15 U.S.C.A. § 1.

17. Monopolies ⚷17.5(13)

Defendant software manufacturer's bundling of its operating system (OS) and Internet web browser constituted illegal tying arrangement, even though defendant ostensibly did not charge for browser; defendant had monopoly power in OS market, bundling caused manufacturer of competing browser, which had the potential to open OS market to competition by allowing development of cross-platform applications, to incur severe drop in market share, defendant prohibited original equipment manufacturers (OEMs) from modifying or deleting any part of its OS in order to install competing browser, defendant stopped including its browser on list of programs subject to add/remove function of OS, browser and OS were separate products in that they were distinguishable in eyes of consumers, and defendant's decision to offer only bundled OS and browser resulted from intent to quell competition rather than technical necessity or business efficiency. Sherman Act, § 1, as amended, 15 U.S.C.A. § 1.

18. Monopolies ⚷17.5(7)

Contractual agreements between defendant Internet web browser manufacturer and Internet service providers (ISPs), Internet content providers (ICPs), independent software vendors, and computer manufacturers, which required distribution and promotion of defendant's browser to partial or complete exclusion of competing web browser, were vertical restrictions that would be subject to rule of reason analysis. Sherman Act, § 1, as amended, 15 U.S.C.A. § 1.

19. Monopolies ⚷17(2.2)

Contractual agreements between defendant Internet web browser manufacturer and largest Internet service provider (ISP), 34 most popular Internet content providers (ICPs), dozens of leading independent software vendors, and one of largest computer manufacturers, which required distribution and promotion of defendant's browser to exclusion of compet-

ing web browser, did not constitute illegal exclusive dealing arrangements, even if they preempted the most efficient channels for competitor to distribute its browser; competitor still had ability to access every PC user by allowing browser to be downloaded from Internet sites and through retail channels, and by mailing browser directly to users. Sherman Act, § 1, as amended, 15 U.S.C.A. § 1.

20. Monopolies ⚷28(7.5)

Even if application of antitrust laws of California, Louisiana, Maryland, New York, Ohio, and Wisconsin were limited to activity that had significant, adverse effect on competition within state or was otherwise contrary to state interests, that element was manifestly proven in action against leading supplier of personal computer (PC) operating system (OSs) that maintained its monopoly power in OS market through anticompetitive means; defendant did business in all 50 states, it was common and universal knowledge that millions of citizens of, and hundreds or thousands of enterprises in, each of the United States used defendant's OS, and companies adversely affected by defendant's anticompetitive conduct transacted business in and employed citizens of each of the plaintiff states.

Dennis C. Vacco, Attorney General of the State of New York, New York, NY, Christopher Crook, U.S. Dept. of Justice, San Francisco, CA, A. Douglas Melamed, U.S. Dept. of Justice, Washington DC, for plaintiff United States in case 1:98cv01232.

Alan R. Kusinitz, Attorney General of the State of New York, New York, NY, for plaintiffs in case 1:98cv01233.

David Paul Murray, Willkie Farr & Gallagher, Washington, DC, for movant Bloomberg News.

Daryl Andrew Libow, Sullivan & Cromwell, Washington, DC, John Lehman Warden, Sullivan & Cromwell, New York, NY, for defendant Microsoft Corp.

Donald Manwell Falk, Mayer, Brown & Platt, Washington, DC for Network Computer Inc.

Joseph Jay Simons, Rogers & Wells, L.L.P., Washington, DC for Sun Microsystems, Inc.

Samuel R. Miller, Folger, Levin & Kahn, L.L.P., San Francisco, CA, and Trisa Jean Thompson, Dell Computer Corporation, Round Rock, TX, for Dell Computer Corporation.

Junius Carlisle McElveen, Jr., Jones, Day, Reavis & Pogue, Washington, DC for IBM.

Allen Roger Snyder, Hogan & Hartson, L.L.P., Washington, DC for movant Netscape Communications Corp.

Lee J. Levine, Levine Sullivan & Koch, LLP, Washington, DC, for movants Seattle Times, ZDTV, ZDNET, The Washington Post Co., Associated Press, Dow Jones & Co., New York Times Co., American Lawyer Media, and USA Today.

Niki Kuckes, Miller, Cassidy, Larroca & Lewin, L.L.P., Washington DC for movant Reuter America, Inc.

Robert A. Gutkin, Pillsbury, Madison & Sutro, L.L.P., Washington, DC for movant San Jose Mercury News, Inc.

Jerry L. Robinett and Roy A. Day, movants pro se.

Richard Joseph Favretto, Mayer, Brown & Platt, Washington, DC for movant Oracle Corp.

William Dean Coston, Venable, Baetjer, Howard & Civiletti, L.L.P., Washington, DC for movant Compaq Computer Corp.

Benjamin S. Sharp, Perkins, Cote, L.L.P., Washington DC for movant Boeing Co.

Jay Ward Brown, Levine Sullivan & Koch, L.L.P., Washington, DC for movant Associated Press.

Carl Richard Schenker, Jr., O'Melveny & Myers, L.L.P., Washingotn, DC for movant Bristol Technology Inc.

Robert Stephen Berry, Berry & Leftwich, Washington, DC for movant Gravity, Inc.

CONCLUSIONS OF LAW

JACKSON, District Judge.

The United States, nineteen individual states, and the District of Columbia ("the plaintiffs") bring these consolidated civil enforcement actions against defendant Microsoft Corporation ("Microsoft") under the Sherman Antitrust Act, 15 U.S.C. §§ 1 and 2. The plaintiffs charge, in essence, that Microsoft has waged an unlawful campaign in defense of its monopoly position in the market for operating systems designed to run on Intel-compatible personal computers ("PCs"). Specifically, the plaintiffs contend that Microsoft violated § 2 of the Sherman Act by engaging in a series of exclusionary, anticompetitive, and predatory acts to maintain its monopoly power. They also assert that Microsoft attempted, albeit unsuccessfully to date, to monopolize the Web browser market, likewise in violation of § 2. Finally, they contend that certain steps taken by Microsoft as part of its campaign to protect its monopoly power, namely tying its browser to its operating system and entering into exclusive dealing arrangements, violated § 1 of the Act.

Upon consideration of the Court's Findings of Fact ("Findings"), filed herein on November 5, 1999, as amended on December 21, 1999, the proposed conclusions of law submitted by the parties, the briefs of *amici curiae,* and the argument of counsel thereon, the Court concludes that Microsoft maintained its monopoly power by anticompetitive means and attempted to monopolize the Web browser market, both in violation of § 2. Microsoft also violated § 1 of the Sherman Act by unlawfully tying its Web browser to its operating system. The facts found do not support the conclusion, however, that the effect of Microsoft's marketing arrangements with other companies constituted unlawful exclusive dealing under criteria established by leading decisions under § 1.

The nineteen states and the District of Columbia ("the plaintiff states") seek to ground liability additionally under their respective antitrust laws. The Court is persuaded that the evidence in the record proving violations of the Sherman Act also satisfies the elements of analogous causes of action arising under the laws of each plaintiff state. For this reason, and for others stated below, the Court holds Microsoft liable under those particular state laws as well.

I. SECTION TWO OF THE SHERMAN ACT

A. Maintenance of Monopoly Power by Anticompetitive Means

[1] Section 2 of the Sherman Act declares that it is unlawful for a person or firm to "monopolize ... any part of the trade or commerce among the several States, or with foreign nations...." 15 U.S.C. § 2. This language operates to limit the means by which a firm may lawfully either acquire or perpetuate monopoly power. Specifically, a firm violates § 2 if it attains or preserves monopoly power through anticompetitive acts. *See United States v. Grinnell Corp.,* 384 U.S. 563, 570–71, 86 S.Ct. 1698, 16 L.Ed.2d 778 (1966) ("The offense of monopoly power 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."); *Eastman Kodak Co. v. Image Technical Services, Inc.,* 504 U.S. 451, 488, 112 S.Ct. 2072, 119 L.Ed.2d 265 (1992) (Scalia, J., dissenting) ("Our § 2 monopolization doctrines are ... directed to discrete situations in which a defendant's possession of substantial market power, combined with his exclusionary or anticompetitive behavior, threatens to defeat or forestall the corrective forces of compe-

tition and thereby sustain or extend the defendant's agglomeration of power.").

1. Monopoly Power

The threshold element of a § 2 monopolization offense being "the possession of monopoly power in the relevant market," *Grinnell,* 384 U.S. at 570, 86 S.Ct. 1698, the Court must first ascertain the boundaries of the commercial activity that can be termed the "relevant market." *See Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.,* 382 U.S. 172, 177, 86 S.Ct. 347, 15 L.Ed.2d 247 (1965) ("Without a definition of [the relevant] market there is no way to measure [defendant's] ability to lessen or destroy competition."). Next, the Court must assess the defendant's actual power to control prices in—or to exclude competition from—that market. *See United States v. E.I. du Pont de Nemours & Co.,* 351 U.S. 377, 391, 76 S.Ct. 994, 100 L.Ed. 1264 (1956) ("Monopoly power is the power to control prices or exclude competition.").

[2] In this case, the plaintiffs postulated the relevant market as being the worldwide licensing of Intel-compatible PC operating systems. Whether this zone of commercial activity actually qualifies as a market, "monopolization of which may be illegal," depends on whether it includes all products "reasonably interchangeable by consumers for the same purposes." *du Pont,* 351 U.S. at 395, 76 S.Ct. 994. *See Rothery Storage & Van Co. v. Atlas Van Lines, Inc.,* 792 F.2d 210, 218 (D.C.Cir. 1986) ("Because the ability of consumers to turn to other suppliers restrains a firm from raising prices above the competitive level, the definition of the 'relevant market' rests on a determination of available substitutes.").

The Court has already found, based on the evidence in this record, that there are currently no products—and that there are not likely to be any in the near future—that a significant percentage of computer users worldwide could substitute for Intel-compatible PC operating systems without incurring substantial costs. Findings ¶¶ 18–29. The Court has further found that no firm not currently marketing Intel-compatible PC operating systems could start doing so in a way that would, within a reasonably short period of time, present a significant percentage of such consumers with a viable alternative to existing Intel-compatible PC operating systems. *Id.* ¶¶ 18, 30–32. From these facts, the Court has inferred that if a single firm or cartel controlled the licensing of all Intel-compatible PC operating systems worldwide, it could set the price of a license substantially above that which would be charged in a competitive market—and leave the price there for a significant period of time—without losing so many customers as to make the action unprofitable. *Id.* ¶ 18. This inference, in turn, has led the Court to find that the licensing of all Intel-compatible PC operating systems worldwide does in fact constitute the relevant market in the context of the plaintiffs' monopoly maintenance claim. *Id.*

[3] The plaintiffs proved at trial that Microsoft possesses a dominant, persistent, and increasing share of the relevant market. Microsoft's share of the worldwide market for Intel-compatible PC operating systems currently exceeds ninety-five percent, and the firm's share would stand well above eighty percent even if the Mac OS were included in the market. *Id.* ¶ 35. The plaintiffs also proved that the applications barrier to entry protects Microsoft's dominant market share. *Id.* ¶¶ 36–52. This barrier ensures that no Intel-compatible PC operating system other than Windows can attract significant consumer demand, and the barrier would operate to the same effect even if Microsoft held its prices substantially above the competitive level for a protracted period of time. *Id.* Together, the proof of dominant market share and the existence of a substantial barrier to effective entry create the presumption that Microsoft enjoys monopoly power. *See United States v. AT & T Co.,* 524 F.Supp. 1336, 1347–48 (D.D.C.

1981) ("a persuasive showing . . . that defendants have monopoly power . . . through various barriers to entry, . . . in combination with the evidence of market shares, suffice[s] at least to meet the government's initial burden, and the burden is then appropriately placed upon defendants to rebut the existence and significance of barriers to entry"), *quoted with approval in Southern Pac. Communications Co. v. AT & T Co.,* 740 F.2d 980, 1001–02 (D.C.Cir.1984).

At trial, Microsoft attempted to rebut the presumption of monopoly power with evidence of both putative constraints on its ability to exercise such power and behavior of its own that is supposedly inconsistent with the possession of monopoly power. None of the purported constraints, however, actually deprive Microsoft of "the ability (1) to price substantially above the competitive level *and* (2) to persist in doing so for a significant period without erosion by new entry or expansion." IIA Phillip E. Areeda, Herbert Hovenkamp & John L. Solow, *Antitrust Law* ¶ 501, at 86 (1995) (emphasis in original); *see* Findings ¶¶ 57–60. Furthermore, neither Microsoft's efforts at technical innovation nor its pricing behavior is inconsistent with the possession of monopoly power. *Id.* ¶¶ 61–66.

[4] Even if Microsoft's rebuttal had attenuated the presumption created by the *prima facie* showing of monopoly power, corroborative evidence of monopoly power abounds in this record: Neither Microsoft nor its OEM customers believe that the latter have—or will have anytime soon—even a single, commercially viable alternative to licensing Windows for pre-installation on their PCs. *Id.* ¶¶ 53–55; *cf. Rothery,* 792 F.2d at 219 n. 4 ("we assume that economic actors usually have accurate perceptions of economic realities"). Moreover, over the past several years, Microsoft has comported itself in a way that could only be consistent with rational behavior for a profit-maximizing firm if the firm knew that it possessed monopoly power, and if it was motivated by a desire to preserve the barrier to entry protecting that power. Findings ¶¶ 67, 99, 136, 141, 215–16, 241, 261–62, 286, 291, 330, 355, 393, 407.

In short, the proof of Microsoft's dominant, persistent market share protected by a substantial barrier to entry, together with Microsoft's failure to rebut that *prima facie* showing effectively and the additional indicia of monopoly power, have compelled the Court to find as fact that Microsoft enjoys monopoly power in the relevant market. *Id.* ¶ 33.

2. Maintenance of Monopoly Power by Anticompetitive Means

[5, 6] In a § 2 case, once it is proved that the defendant possesses monopoly power in a relevant market, liability for monopolization depends on a showing that the defendant used anticompetitive methods to achieve or maintain its position. *See United States v. Grinnell,* 384 U.S. 563, 570–71, 86 S.Ct. 1698, 16 L.Ed.2d 778 (1966); *Eastman Kodak Co. v. Image Technical Services, Inc.,* 504 U.S. 451, 488, 112 S.Ct. 2072, 119 L.Ed.2d 265 (1992) (Scalia, J., dissenting); *Intergraph Corp. v. Intel Corp.,* 195 F.3d 1346, 1353 (Fed.Cir. 1999). Prior cases have established an analytical approach to determining whether challenged conduct should be deemed anticompetitive in the context of a monopoly maintenance claim. The threshold question in this analysis is whether the defendant's conduct is "exclusionary"—that is, whether it has restricted significantly, or threatens to restrict significantly, the ability of other firms to compete in the relevant market on the merits of what they offer customers. *See Eastman Kodak,* 504 U.S. at 488, 112 S.Ct. 2072 (Scalia, J., dissenting) (§ 2 is "directed to discrete situations" in which the behavior of firms with monopoly power "threatens to defeat or forestall the corrective forces of competition").[1]

1. Proof that the defendant's conduct was motivated by a desire to prevent other firms from

If the evidence reveals a significant exclusionary impact in the relevant market, the defendant's conduct will be labeled "anticompetitive"—and liability will attach—unless the defendant comes forward with specific, procompetitive business motivations that explain the full extent of its exclusionary conduct. *See Eastman Kodak,* 504 U.S. at 483, 112 S.Ct. 2072 (declining to grant defendant's motion for summary judgment because factual questions remained as to whether defendant's asserted justifications were sufficient to explain the exclusionary conduct or were instead merely pretextual); *see also Aspen Skiing Co. v. Aspen Highlands Skiing Corp.,* 472 U.S. 585, 605 n. 32, 105 S.Ct. 2847, 86 L.Ed.2d 467 (1985) (holding that the second element of a monopoly maintenance claim is satisfied by proof of " 'behavior that not only (1) tends to impair the opportunities of rivals, but also (2) either does not further competition on the merits or does so in an unnecessarily restrictive way' ") (quoting III Phillip E. Areeda & Donald F. Turner, *Antitrust Law* ¶ 626b, at 78 (1978)).

[7] If the defendant with monopoly power consciously antagonized its customers by making its products less attractive to them—or if it incurred other costs, such as large outlays of development capital and forfeited opportunities to derive revenue from it—with no prospect of compensation other than the erection or preservation of barriers against competition by equally efficient firms, the Court may deem the defendant's conduct "predatory." As the D.C. Circuit stated in *Neumann v. Reinforced Earth Co.,*

> [P]redation involves aggression against business rivals through the use of business practices that would not be considered profit maximizing except for the expectation that (1) actual rivals will be driven from the market, or the entry of potential rivals blocked or delayed, so that the predator will gain or retain a market share sufficient to command monopoly profits, or (2) rivals will be chastened sufficiently to abandon competitive behavior the predator finds threatening to its realization of monopoly profits.

786 F.2d 424, 427 (D.C.Cir.1986).

[8] Proof that a profit-maximizing firm took predatory action should suffice to demonstrate the threat of substantial exclusionary effect; to hold otherwise would be to ascribe irrational behavior to the defendant. Moreover, predatory conduct, by definition as well as by nature, lacks procompetitive business motivation. *See Aspen Skiing,* 472 U.S. at 610–11, 105 S.Ct. 2847 (evidence indicating that defendant's conduct was "motivated entirely by a decision to avoid providing any benefits" to a rival supported the inference that defendant's conduct "was not motivated by efficiency concerns"). In other words, predatory behavior is patently anticompetitive. Proof that a firm with monopoly power engaged in such behavior thus necessitates a finding of liability under § 2.

[9] In this case, Microsoft early on recognized middleware as the Trojan horse that, once having, in effect, infiltrated the applications barrier, could enable rival operating systems to enter the market for Intel-compatible PC operating systems unimpeded. Simply put, middleware threatened to demolish Microsoft's coveted monopoly power. Alerted to the threat, Microsoft strove over a period of approximately four years to prevent middleware technologies from fostering the development of enough full-featured, cross-platform applications to erode the applications barrier. In pursuit of this goal, Microsoft sought to convince developers to concen-

competing on the merits can contribute to a finding that the conduct has had, or will have, the intended, exclusionary effect. *See United States v. United States Gypsum Co.,* 438 U.S. 422, 436 n. 13, 98 S.Ct. 2864, 57 L.Ed.2d 854 (1978) ("consideration of intent may play an important role in divining the actual nature and effect of the alleged anticompetitive conduct").

trate on Windows-specific APIs and ignore interfaces exposed by the two incarnations of middleware that posed the greatest threat, namely, Netscape's Navigator Web browser and Sun's implementation of the Java technology. Microsoft's campaign succeeded in preventing—for several years, and perhaps permanently—Navigator and Java from fulfilling their potential to open the market for Intel-compatible PC operating systems to competition on the merits. Findings ¶¶ 133, 378. Because Microsoft achieved this result through exclusionary acts that lacked procompetitive justification, the Court deems Microsoft's conduct the maintenance of monopoly power by anticompetitive means.

a. Combating the Browser Threat

The same ambition that inspired Microsoft's efforts to induce Intel, Apple, RealNetworks and IBM to desist from certain technological innovations and business initiatives—namely, the desire to preserve the applications barrier—motivated the firm's June 1995 proposal that Netscape abstain from releasing platform-level browsing software for 32–bit versions of Windows. *See id.* ¶¶ 79–80, 93–132. This proposal, together with the punitive measures that Microsoft inflicted on Netscape when it rebuffed the overture, illuminates the context in which Microsoft's subsequent behavior toward PC manufacturers ("OEMs"), Internet access providers ("IAPs"), and other firms must be viewed.

When Netscape refused to abandon its efforts to develop Navigator into a substantial platform for applications development, Microsoft focused its efforts on minimizing the extent to which developers would avail themselves of interfaces exposed by that nascent platform. Microsoft realized that the extent of developers' reliance on Netscape's browser platform would depend largely on the size and trajectory of Navigator's share of browser usage. Microsoft thus set out to maximize Internet Explorer's share of browser usage at Navigator's expense. *Id.* ¶¶ 133, 359–61. The core of this strategy was ensuring that the firms comprising the most effective channels for the generation of browser usage would devote their distributional and promotional efforts to Internet Explorer rather than Navigator. Recognizing that pre-installation by OEMs and bundling with the proprietary software of IAPs led more directly and efficiently to browser usage than any other practices in the industry, Microsoft devoted major efforts to usurping those two channels. *Id.* ¶ 143.

i. The OEM Channel

With respect to OEMs, Microsoft's campaign proceeded on three fronts. First, Microsoft bound Internet Explorer to Windows with contractual and, later, technological shackles in order to ensure the prominent (and ultimately permanent) presence of Internet Explorer on every Windows user's PC system, and to increase the costs attendant to installing and using Navigator on any PCs running Windows. *Id.* ¶¶ 155–74. Second, Microsoft imposed stringent limits on the freedom of OEMs to reconfigure or modify Windows 95 and Windows 98 in ways that might enable OEMs to generate usage for Navigator in spite of the contractual and technological devices that Microsoft had employed to bind Internet Explorer to Windows. *Id.* ¶¶ 202–29. Finally, Microsoft used incentives and threats to induce especially important OEMs to design their distributional, promotional and technical efforts to favor Internet Explorer to the exclusion of Navigator. *Id.* ¶¶ 230–38.

Microsoft's actions increased the likelihood that pre-installation of Navigator onto Windows would cause user confusion and system degradation, and therefore lead to higher support costs and reduced sales for the OEMs. *Id.* ¶¶ 159, 172. Not willing to take actions that would jeopardize their already slender profit margins, OEMs felt compelled by Microsoft's actions to reduce drastically their distribution and promotion of Navigator. *Id.*

¶¶ 239, 241. The substantial inducements that Microsoft held out to the largest OEMs only further reduced the distribution and promotion of Navigator in the OEM channel. *Id.* ¶¶ 230, 233. The response of OEMs to Microsoft's efforts had a dramatic, negative impact on Navigator's usage share. *Id.* ¶ 376. The drop in usage share, in turn, has prevented Navigator from being the vehicle to open the relevant market to competition on the merits. *Id.* ¶¶ 377–78, 383.

Microsoft fails to advance any legitimate business objectives that actually explain the full extent of this significant exclusionary impact. The Court has already found that no quality-related or technical justifications fully explain Microsoft's refusal to license Windows 95 to OEMs without version 1.0 through 4.0 of Internet Explorer, or its refusal to permit them to uninstall versions 3.0 and 4.0. *Id.* ¶¶ 175–76. The same lack of justification applies to Microsoft's decision not to offer a browserless version of Windows 98 to consumers and OEMs, *id.* ¶ 177, as well as to its claim that it could offer "best of breed" implementations of functionalities in Web browsers. With respect to the latter assertion, Internet Explorer is not demonstrably the current "best of breed" Web browser, nor is it likely to be so at any time in the immediate future. The fact that Microsoft itself was aware of this reality only further strengthens the conclusion that Microsoft's decision to tie Internet Explorer to Windows cannot truly be explained as an attempt to benefit consumers and improve the efficiency of the software market generally, but rather as part of a larger campaign to quash innovation that threatened its monopoly position. *Id.* ¶¶ 195, 198.

To the extent that Microsoft still asserts a copyright defense, relying upon federal copyright law as a justification for its various restrictions on OEMs, that defense neither explains nor operates to immunize Microsoft's conduct under the Sherman Act. As a general proposition, Microsoft argues that the federal Copyright Act, 17 U.S.C. § 101 *et seq.,* endows the holder of a valid copyright in software with an absolute right to prevent licensees, in this case the OEMs, from shipping modified versions of its product without its express permission. In truth, Windows 95 and Windows 98 are covered by copyright registrations, Findings ¶ 228, that "constitute *prima facie* evidence of the validity of the copyright." 17 U.S.C. § 410(c). But the *validity* of Microsoft's copyrights has never been in doubt; the issue is what, precisely, they protect.

[10] Microsoft has presented no evidence that the contractual (or the technological) restrictions it placed on OEMs' ability to alter Windows derive from any of the enumerated rights explicitly granted to a copyright holder under the Copyright Act. Instead, Microsoft argues that the restrictions "simply restate" an expansive right to preserve the "integrity" of its copyrighted software against any "distortion," "truncation," or "alteration," a right nowhere mentioned among the Copyright Act's list of exclusive rights, 17 U.S.C. § 106, thus raising some doubt as to its existence. *See Twentieth Century Music Corp. v. Aiken,* 422 U.S. 151, 155, 95 S.Ct. 2040, 45 L.Ed.2d 84 (1975) (not all uses of a work are within copyright holder's control; rights limited to specifically granted "exclusive rights"); *cf.* 17 U.S.C. § 501(a) (infringement means violating specifically enumerated rights).[2]

[11] It is also well settled that a copyright holder is not by reason thereof entitled to employ the perquisites in ways that directly threaten competition. *See, e.g.,*

2. While Microsoft is correct that some courts have also recognized the right of a copyright holder to preserve the "integrity" of artistic works in addition to those rights enumerated in the Copyright Act, the Court nevertheless concludes that those cases, being actions for infringement without antitrust implications, are inapposite to the one currently before it. *See, e.g., WGN Continental Broadcasting Co. v. United Video, Inc.,* 693 F.2d 622 (7th Cir. 1982); *Gilliam v. ABC, Inc.,* 538 F.2d 14 (2d Cir.1976).

Eastman Kodak, 504 U.S. at 479 n. 29, 112 S.Ct. 2072 ("The Court has held many times that power gained through some natural and legal advantage such as a ... copyright, ... can give rise to liability if 'a seller exploits his dominant position in one market to expand his empire into the next.' ") (quoting *Times–Picayune Pub. Co. v. United States,* 345 U.S. 594, 611, 73 S.Ct. 872, 97 L.Ed. 1277 (1953)); *Square D Co. v. Niagara Frontier Tariff Bureau, Inc.,* 476 U.S. 409, 421, 106 S.Ct. 1922, 90 L.Ed.2d 413 (1986); *Data General Corp. v. Grumman Systems Support Corp.,* 36 F.3d 1147, 1186 n. 63 (1st Cir.1994) (a copyright does not exempt its holder from antitrust inquiry where the copyright is used as part of a scheme to monopolize); *see also Image Technical Services, Inc. v. Eastman Kodak Co.,* 125 F.3d 1195, 1219 (9th Cir.1997), *cert. denied,* 523 U.S. 1094, 118 S.Ct. 1560, 140 L.Ed.2d 792 (1998) ("Neither the aims of intellectual property law, nor the antitrust laws justify allowing a monopolist to rely upon a pretextual business justification to mask anticompetitive conduct."). Even constitutional privileges confer no immunity when they are abused for anticompetitive purposes. *See Lorain Journal Co. v. United States,* 342 U.S. 143, 155–56, 72 S.Ct. 181, 96 L.Ed. 162 (1951).

The Court has already found that the true impetus behind Microsoft's restrictions on OEMs was not its desire to maintain a somewhat amorphous quality it refers to as the "integrity" of the Windows platform, nor even to ensure that Windows afforded a uniform and stable platform for applications development. Microsoft itself engendered, or at least countenanced, instability and inconsistency by permitting Microsoft-friendly modifications to the desktop and boot sequence, and by releasing updates to Internet Explorer more frequently than it released new versions of Windows. Findings ¶ 226. Add to this the fact that the modifications OEMs desired to make would not have removed or altered any Windows APIs, and thus would not have disrupted any of Windows' functionalities, and it is apparent that Microsoft's conduct is effectively explained by its foreboding that OEMs would pre-install and give prominent placement to middleware like Navigator that could attract enough developer attention to weaken the applications barrier to entry. *Id.* ¶ 227. In short, if Microsoft was truly inspired by a genuine concern for maximizing consumer satisfaction, as well as preserving its substantial investment in a worthy product, then it would have relied more on the power of the very competitive PC market, and less on its own market power, to prevent OEMs from making modifications that consumers did not want. *Id.* ¶¶ 225, 228–29.

ii. The IAP Channel

Microsoft adopted similarly aggressive measures to ensure that the IAP channel would generate browser usage share for Internet Explorer rather than Navigator. To begin with, Microsoft licensed Internet Explorer and the Internet Explorer Access Kit to hundreds of IAPs for no charge. *Id.* ¶¶ 250–51. Then, Microsoft extended valuable promotional treatment to the ten most important IAPs in exchange for their commitment to promote and distribute Internet Explorer and to exile Navigator from the desktop. *Id.* ¶¶ 255–58, 261, 272, 288–90, 305–06. Finally, in exchange for efforts to upgrade existing subscribers to client software that came bundled with Internet Explorer instead of Navigator, Microsoft granted rebates—and in some cases made outright payments—to those same IAPs. *Id.* ¶¶ 259–60, 295. Given the importance of the IAP channel to browser usage share, it is fair to conclude that these inducements and restrictions contributed significantly to the drastic changes that have in fact occurred in Internet Explorer's and Navigator's respective usage shares. *Id.* ¶¶ 144–47, 309–10. Microsoft's actions in the IAP channel thereby contributed significantly to preserving the applications barrier to entry.

There are no valid reasons to justify the full extent of Microsoft's exclusionary behavior in the IAP channel. A desire to limit free riding on the firm's investment in consumer-oriented features, such as the Referral Server and the Online Services Folder, can, in some circumstances, qualify as a procompetitive business motivation; but that motivation does not explain the full extent of the restrictions that Microsoft actually imposed upon IAPs. Under the terms of the agreements, an IAP's failure to keep Navigator shipments below the specified percentage primed Microsoft's contractual right to dismiss the IAP from its own favored position in the Referral Server or the Online Services Folder. This was true even if the IAP had refrained from promoting Navigator in its client software included with Windows, had purged all mention of Navigator from any Web site directly connected to the Referral Server, and had distributed no browser other than Internet Explorer to the new subscribers it gleaned from the Windows desktop. *Id.* ¶¶ 258, 262, 289. Thus, Microsoft's restrictions closed off a substantial amount of distribution that would not have constituted a free ride to Navigator.

Nor can an ostensibly procompetitive desire to "foster brand association" explain the full extent of Microsoft's restrictions. If Microsoft's only concern had been brand association, restrictions on the ability of IAPs to promote Navigator likely would have sufficed. It is doubtful that Microsoft would have paid IAPs to induce their existing subscribers to drop Navigator in favor of Internet Explorer unless it was motivated by a desire to extinguish Navigator as a threat. *See id.* ¶¶ 259, 295. More generally, it is crucial to an understanding of Microsoft's intentions to recognize that Microsoft paid for the fealty of IAPs with large investments in software development for their benefit, conceded opportunities to take a profit, suffered competitive disadvantage to Microsoft's own OLS, and gave outright bounties. *Id.* ¶¶ 259–60, 277, 284–86, 295. Considering that Microsoft never intended to derive appreciable revenue from Internet Explorer directly, *id.* ¶¶ 136–37, these sacrifices could only have represented rational business judgments to the extent that they promised to diminish Navigator's share of browser usage and thereby contribute significantly to eliminating a threat to the applications barrier to entry. *Id.* ¶ 291. Because the full extent of Microsoft's exclusionary initiatives in the IAP channel can only be explained by the desire to hinder competition on the merits in the relevant market, those initiatives must be labeled anticompetitive.

In sum, the efforts Microsoft directed at OEMs and IAPs successfully ostracized Navigator as a practical matter from the two channels that lead most efficiently to browser usage. Even when viewed independently, these two prongs of Microsoft's campaign threatened to "forestall the corrective forces of competition" and thereby perpetuate Microsoft's monopoly power in the relevant market. *Eastman Kodak Co. v. Image Technical Services, Inc.,* 504 U.S. 451, 488, 112 S.Ct. 2072, 119 L.Ed.2d 265 (1992) (Scalia, J., dissenting). Therefore, whether they are viewed separately or together, the OEM and IAP components of Microsoft's anticompetitive campaign merit a finding of liability under § 2.

iii. ICPs, ISVs and Apple

No other distribution channels for browsing software approach the efficiency of OEM pre-installation and IAP bundling. Findings ¶¶ 144–47. Nevertheless, protecting the applications barrier to entry was so critical to Microsoft that the firm was willing to invest substantial resources to enlist ICPs, ISVs, and Apple in its campaign against the browser threat. By extracting from Apple terms that significantly diminished the usage of Navigator on the Mac OS, Microsoft helped to ensure that developers would not view Navigator as truly cross-platform middleware. *Id.* ¶ 356. By granting ICPs and ISVs free

licenses to bundle Internet Explorer with their offerings, and by exchanging other valuable inducements for their agreement to distribute, promote and rely on Internet Explorer rather than Navigator, Microsoft directly induced developers to focus on its own APIs rather than ones exposed by Navigator. *Id.* ¶¶ 334–35, 340. These measures supplemented Microsoft's efforts in the OEM and IAP channels.

Just as they fail to account for the measures that Microsoft took in the IAP channel, the goals of preventing free riding and preserving brand association fail to explain the full extent of Microsoft's actions in the ICP channel. *Id.* ¶¶ 329–30. With respect to the ISV agreements, Microsoft has put forward no procompetitive business ends whatsoever to justify their exclusionary terms. *See id.* ¶¶ 339–40. Finally, Microsoft's willingness to make the sacrifices involved in cancelling Mac Office, and the concessions relating to browsing software that it demanded from Apple, can only be explained by Microsoft's desire to protect the applications barrier to entry from the threat posed by Navigator. *Id.* ¶ 355. Thus, once again, Microsoft is unable to justify the full extent of its restrictive behavior.

b. Combating the Java Threat

As part of its grand strategy to protect the applications barrier, Microsoft employed an array of tactics designed to maximize the difficulty with which applications written in Java could be ported from Windows to other platforms, and *vice versa.* The first of these measures was the creation of a Java implementation for Windows that undermined portability and was incompatible with other implementations. *Id.* ¶¶ 387–93. Microsoft then induced developers to use its implementation of Java rather than Sun-compliant ones. It pursued this tactic directly, by means of subterfuge and barter, and indirectly, through its campaign to minimize Navigator's usage share. *Id.* ¶¶ 394, 396–97, 399–400, 401–03. In a separate effort to prevent the development of easily portable Java applications, Microsoft used its monopoly power to prevent firms such as Intel from aiding in the creation of cross-platform interfaces. *Id.* ¶¶ 404–06.

Microsoft's tactics induced many Java developers to write their applications using Microsoft's developer tools and to refrain from distributing Sun-compliant JVMs to Windows users. This stratagem has effectively resulted in fewer applications that are easily portable. *Id.* ¶ 398. What is more, Microsoft's actions interfered with the development of new cross-platform Java interfaces. *Id.* ¶ 406. It is not clear whether, absent Microsoft's machinations, Sun's Java efforts would by now have facilitated porting between Windows and other platforms to a degree sufficient to render the applications barrier to entry vulnerable. It is clear, however, that Microsoft's actions markedly impeded Java's progress to that end. *Id.* ¶ 407. The evidence thus compels the conclusion that Microsoft's actions with respect to Java have restricted significantly the ability of other firms to compete on the merits in the market for Intel-compatible PC operating systems.

Microsoft's actions to counter the Java threat went far beyond the development of an attractive alternative to Sun's implementation of the technology. Specifically, Microsoft successfully pressured Intel, which was dependent in many ways on Microsoft's good graces, to abstain from aiding in Sun's and Netscape's Java development work. *Id.* ¶¶ 396, 406. Microsoft also deliberately designed its Java development tools so that developers who were opting for portability over performance would nevertheless unwittingly write Java applications that would run only on Windows. *Id.* ¶ 394. Moreover, Microsoft's means of luring developers to its Java implementation included maximizing Internet Explorer's share of browser usage at Navigator's expense in ways the Court has already held to be anticompetitive. *See supra,* § I.A.2.a. Finally, Microsoft impelled ISVs, which are dependent upon

Microsoft for technical information and certifications relating to Windows, to use and distribute Microsoft's version of the Windows JVM rather than any Sun-compliant version. *Id.* ¶¶ 401–03.

These actions cannot be described as competition on the merits, and they did not benefit consumers. In fact, Microsoft's actions did not even benefit Microsoft in the short run, for the firm's efforts to create incompatibility between its JVM for Windows and others' JVMs for Windows resulted in fewer total applications being able to run on Windows than otherwise would have been written. Microsoft was willing nevertheless to obstruct the development of Windows-compatible applications if they would be easy to port to other platforms and would thus diminish the applications barrier to entry. *Id.* ¶ 407.

c. Microsoft's Conduct Taken As a Whole

As the foregoing discussion illustrates, Microsoft's campaign to protect the applications barrier from erosion by network-centric middleware can be broken down into discrete categories of activity, several of which on their own independently satisfy the second element of a § 2 monopoly maintenance claim. But only when the separate categories of conduct are viewed, as they should be, as a single, well-coordinated course of action does the full extent of the violence that Microsoft has done to the competitive process reveal itself. *See Continental Ore Co. v. Union Carbide & Carbon Corp.,* 370 U.S. 690, 699, 82 S.Ct. 1404, 8 L.Ed.2d 777 (1962) (counseling that in Sherman Act cases "plaintiffs should be given the full benefit of their proof without tightly compartmentalizing the various factual components and wiping the slate clean after scrutiny of each"). In essence, Microsoft mounted a deliberate assault upon entrepreneurial efforts that, left to rise or fall on their own merits, could well have enabled the introduction of competition into the market for Intel-compatible PC operating systems. *Id.* ¶ 411. While the evidence does not prove that they would have succeeded absent Microsoft's actions, it does reveal that Microsoft placed an oppressive thumb on the scale of competitive fortune, thereby effectively guaranteeing its continued dominance in the relevant market. More broadly, Microsoft's anticompetitive actions trammeled the competitive process through which the computer software industry generally stimulates innovation and conduces to the optimum benefit of consumers. *Id.* ¶ 412.

Viewing Microsoft's conduct as a whole also reinforces the conviction that it was predacious. Microsoft paid vast sums of money, and renounced many millions more in lost revenue every year, in order to induce firms to take actions that would help enhance Internet Explorer's share of browser usage at Navigator's expense. *Id.* ¶ 139. These outlays cannot be explained as subventions to maximize return from Internet Explorer. Microsoft has no intention of ever charging for licenses to use or distribute its browser. *Id.* ¶¶ 137–38. Moreover, neither the desire to bolster demand for Windows nor the prospect of ancillary revenues from Internet Explorer can explain the lengths to which Microsoft has gone. In fact, Microsoft has expended wealth and foresworn opportunities to realize more in a manner and to an extent that can only represent a rational investment if its purpose was to perpetuate the applications barrier to entry. *Id.* ¶¶ 136, 139–42. Because Microsoft's business practices "would not be considered profit maximizing except for the expectation that . . . the entry of potential rivals" into the market for Intel-compatible PC operating systems will be "blocked or delayed," *Neumann v. Reinforced Earth Co.,* 786 F.2d 424, 427 (D.C.Cir.1986), Microsoft's campaign must be termed predatory. Since the Court has already found that Microsoft possesses monopoly power, *see supra,* § I.A.1, the predatory nature of the firm's conduct compels the Court to hold Microsoft liable under § 2 of the Sherman Act.

operating system and a browser separately, or at least in separable form. *Id.* ¶ 153. Microsoft is the only firm to refuse to license its operating system without a browser. *Id.*; *see Berkey Photo, Inc. v. Eastman Kodak Co.,* 603 F.2d 263, 287 (2d Cir.1979). This Court concludes that Microsoft's decision to offer only the bundled—"integrated"—version of Windows and Internet Explorer derived not from technical necessity or business efficiencies; rather, it was the result of a deliberate and purposeful choice to quell incipient competition before it reached truly minatory proportions.

The Court is fully mindful of the reasons for the admonition of the D.C. Circuit in *Microsoft II* of the perils associated with a rigid application of the traditional "separate products" test to computer software design. Given the virtually infinite malleability of software code, software upgrades and new application features, such as Web browsers, could virtually always be configured so as to be capable of separate and subsequent installation by an immediate licensee or end user. A court mechanically applying a strict "separate demand" test could improvidently wind up condemning "integrations" that represent genuine improvements to software that are benign from the standpoint of consumer welfare and a competitive market. Clearly, this is not a desirable outcome. Similar concerns have motivated other courts, as well as the D.C. Circuit, to resist a strict application of the "separate products" tests to similar questions of "technological tying." *See, e.g., Foremost Pro Color, Inc. v. Eastman Kodak Co.,* 703 F.2d 534, 542–43 (9th Cir. 1983); *Response of Carolina, Inc. v. Leasco Response, Inc.,* 537 F.2d 1307, 1330 (5th Cir.1976); *Telex Corp. v. IBM Corp.,* 367 F.Supp. 258, 347 (N.D.Okla.1973).

To the extent that the Supreme Court has spoken authoritatively on these issues, however, this Court is bound to follow its guidance and is not at liberty to extrapolate a new rule governing the tying of software products. Nevertheless, the Court is confident that its conclusion, limited by the unique circumstances of this case, is consistent with the Supreme Court's teaching to date.[6]

B. Exclusive Dealing Arrangements

[18] Microsoft's various contractual agreements with some OLSs, ICPs, ISVs, Compaq and Apple are also called into question by plaintiffs as exclusive dealing arrangements under the language in § 1 prohibiting "contract[s] ... in restraint of trade or commerce...." 15 U.S.C. § 1. As detailed in § I.A.2, *supra,* each of these agreements with Microsoft required the other party to promote and distribute Internet Explorer to the partial or complete exclusion of Navigator. In exchange, Microsoft offered, to some or all of these parties, promotional patronage, substantial financial subsidies, technical support, and other valuable consideration. Under the clear standards established by the Supreme Court, these types of "vertical restrictions" are subject to a Rule of Reason

6. *Amicus curiae* Lawrence Lessig has suggested that a corollary concept relating to the bundling of "partial substitutes" in the context of software design may be apposite as a limiting principle for courts called upon to assess the compliance of these products with antitrust law. This Court has been at pains to point out that the true source of the threat posed to the competitive process by Microsoft's bundling decisions stems from the fact that a competitor to the tied product bore the potential, but had not yet matured sufficiently, to open up the tying product market to competition. Under these conditions, the anticompetitive harm from a software bundle is much more substantial and pernicious than the typical tie. *See* X Phillip E. Areeda, Einer Elhauge & Herbert Hovenkamp, *Antitrust Law* ¶ 1747 (1996). A company able to leverage its substantial power in the tying product market in order to force consumers to accept a tie of partial substitutes is thus able to spread inefficiency from one market to the next, *id.* at 232, and thereby "sabotage a nascent technology that might compete with the tying product but for its foreclosure from the market." III Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶ 1746.1d at 495 (Supp.1999).

analysis. *See Continental T.V., Inc. v. GTE Sylvania Inc.,* 433 U.S. 36, 49, 97 S.Ct. 2549, 53 L.Ed.2d 568 (1977); *Jefferson Parish,* 466 U.S. at 44–45, 104 S.Ct. 1551 (O'Connor, J., concurring); *cf. Business Elecs. Corp. v. Sharp Elecs. Corp.,* 485 U.S. 717, 724–26, 108 S.Ct. 1515, 99 L.Ed.2d 808 (1988) (holding that Rule of Reason analysis presumptively applies to cases brought under § 1 of the Sherman Act).

Acknowledging that some exclusive dealing arrangements may have benign objectives and may create significant economic benefits, *see Tampa Electric Co. v. Nashville Coal Co.,* 365 U.S. 320, 333–35, 81 S.Ct. 623, 5 L.Ed.2d 580 (1961), courts have tended to condemn under the § 1 Rule of Reason test only those agreements that have the effect of foreclosing a competing manufacturer's brands from the relevant market. More specifically, courts are concerned with those exclusive dealing arrangements that work to place so much of a market's available distribution outlets in the hands of a single firm as to make it difficult for other firms to continue to compete effectively, or even to exist, in the relevant market. *See U.S. Healthcare Inc. v. Healthsource, Inc.,* 986 F.2d 589, 595 (1st Cir.1993); *Interface Group, Inc. v. Massachusetts Port Authority,* 816 F.2d 9, 11 (1st Cir.1987) (relying upon III Phillip E. Areeda & Donald F. Turner, *Antitrust Law* ¶ 732 (1978), *Tampa Electric,* 365 U.S. at 327–29, 81 S.Ct. 623, and *Standard Oil Co. v. United States,* 337 U.S. 293, 69 S.Ct. 1051, 93 L.Ed. 1371 (1949)).

To evaluate an agreement's likely anticompetitive effects, courts have consistently looked at a variety of factors, including: (1) the degree of exclusivity and the relevant line of commerce implicated by the agreements' terms; (2) whether the percentage of the market foreclosed by the contracts is substantial enough to import that rivals will be largely excluded from competition; (3) the agreements' actual anticompetitive effect in the relevant line of commerce; (4) the existence of any legitimate, procompetitive business justifications offered by the defendant; (5) the length and irrevocability of the agreements; and (6) the availability of any less restrictive means for achieving the same benefits. *See, e.g., Tampa Electric,* 365 U.S. at 326–35, 81 S.Ct. 623; *Roland Machinery Co. v. Dresser Industries, Inc.,* 749 F.2d 380, 392–95 (7th Cir.1984); *see also* XI Herbert Hovenkamp, *Antitrust Law* ¶ 1820 (1998).

Where courts have found that the agreements in question failed to foreclose absolutely outlets that together accounted for a substantial percentage of the total distribution of the relevant products, they have consistently declined to assign liability. *See, e.g., id.* ¶ 1821; *U.S. Healthcare,* 986 F.2d at 596–97; *Roland Mach. Co.,* 749 F.2d at 394 (failure of plaintiff to meet threshold burden of proving that exclusive dealing arrangement is likely to keep at least one significant competitor from doing business in relevant market dictates no liability under § 1). This Court has previously observed that the case law suggests that, unless the evidence demonstrates that Microsoft's agreements excluded Netscape altogether from access to roughly forty percent of the browser market, the Court should decline to find such agreements in violation of § 1. *See United States v. Microsoft Corp.,* Nos. CIV. A. 98–1232, 98–1233, 1998 WL 614485, at *19 (D.D.C. Sept. 14, 1998) (citing cases that tended to converge upon forty percent foreclosure rate for finding of § 1 liability).

[19] The only agreements revealed by the evidence which could be termed so "exclusive" as to merit scrutiny under the § 1 Rule of Reason test are the agreements Microsoft signed with Compaq, AOL and several other OLSs, the top ICPs, the leading ISVs, and Apple. The Findings of Fact also establish that, among the OEMs discussed *supra,* Compaq was the only one to fully commit itself to Microsoft's terms for distributing and promoting Internet Explorer to the exclusion of Navigator. Beginning with

its decisions in 1996 and 1997 to promote Internet Explorer exclusively for its PC products, Compaq essentially ceased to distribute or pre-install Navigator at all in exchange for significant financial remuneration from Microsoft. Findings ¶¶ 230–34. AOL's March 12 and October 28, 1996 agreements with Microsoft also guaranteed that, for all practical purposes, Internet Explorer would be AOL's browser of choice, to be distributed and promoted through AOL's dominant, flagship online service, thus leaving Navigator to fend for itself. *Id.* ¶¶ 287–90, 293–97. In light of the severe shipment quotas and promotional restrictions for third-party browsers imposed by the agreements, the fact that Microsoft still permitted AOL to offer Navigator through a few subsidiary channels does not negate this conclusion. The same conclusion as to exclusionary effect can be drawn with respect to Microsoft's agreements with AT & T WorldNet, Prodigy and CompuServe, since those contract terms were almost identical to the ones contained in AOL's March 1996 agreement. *Id.* ¶¶ 305–06.

Microsoft also successfully induced some of the most popular ICPs and ISVs to commit to promote, distribute and utilize Internet Explorer technologies exclusively in their Web content in exchange for valuable placement on the Windows desktop and technical support. Specifically, the "Top Tier" and "Platinum" agreements that Microsoft formed with thirty-four of the most popular ICPs on the Web ensured that Navigator was effectively shut out of these distribution outlets for a significant period of time. *Id.* ¶¶ 317–22, 325–26, 332. In the same way, Microsoft's "First Wave" contracts provided crucial technical information to dozens of leading ISVs that agreed to make their Web-centric applications completely reliant on technology specific to Internet Explorer. *Id.* ¶¶ 337, 339–40. Finally, Apple's 1997 Technology Agreement with Microsoft prohibited Apple from actively promoting any non-Microsoft browsing software in any way or from pre-installing a browser other than Internet Explorer. *Id.* ¶¶ 350–52. This arrangement eliminated all meaningful avenues of distribution of Navigator through Apple. *Id.*

Notwithstanding the extent to which these "exclusive" distribution agreements preempted the most efficient channels for Navigator to achieve browser usage share, however, the Court concludes that Microsoft's multiple agreements with distributors did not ultimately deprive Netscape of the ability to have access to every PC user worldwide to offer an opportunity to install Navigator. Navigator can be downloaded from the Internet. It is available through myriad retail channels. It can (and has been) mailed directly to an unlimited number of households. How precisely it managed to do so is not shown by the evidence, but in 1998 alone, for example, Netscape was able to distribute 160 million copies of Navigator, contributing to an increase in its installed base from 15 million in 1996 to 33 million in December 1998. *Id.* ¶ 378. As such, the evidence does not support a finding that these agreements completely excluded Netscape from any constituent portion of the worldwide browser market, the relevant line of commerce.

The fact that Microsoft's arrangements with various firms did not foreclose enough of the relevant market to constitute a § 1 violation in no way detracts from the Court's assignment of liability for the same arrangements under § 2. As noted above, all of Microsoft's agreements, including the non-exclusive ones, severely restricted Netscape's access to those distribution channels leading most efficiently to the acquisition of browser usage share. They thus rendered Netscape harmless as a platform threat and preserved Microsoft's operating system monopoly, in violation of § 2. But virtually all the leading case authority dictates that liability under § 1 must hinge upon whether Netscape was actually shut out of the Web browser market, or at least whether it was forced to reduce output below a subsistence level.

The fact that Netscape was not allowed access to the most direct, efficient ways to cause the greatest number of consumers to use Navigator is legally irrelevant to a final determination of plaintiffs' § 1 claims.

Other courts in similar contexts have declined to find liability where alternative channels of distribution are available to the competitor, even if those channels are not as efficient or reliable as the channels foreclosed by the defendant. In *Omega Environmental, Inc. v. Gilbarco, Inc.*, 127 F.3d 1157 (9th Cir.1997), for example, the Ninth Circuit found that a manufacturer of petroleum dispensing equipment "foreclosed roughly 38% of the relevant market for sales." 127 F.3d at 1162. Nonetheless, the Court refused to find the defendant liable for exclusive dealing because "potential alternative sources of distribution" existed for its competitors. *Id.* at 1163. Rejecting plaintiff's argument (similar to the one made in this case) that these alternatives were "inadequate substitutes for the existing distributors," the Court stated that "[c]ompetitors are free to sell directly, to develop alternative distributors, or to compete for the services of existing distributors. Antitrust laws require no more." *Id.; accord Seagood Trading Corp. v. Jerrico, Inc.*, 924 F.2d 1555, 1572–73 (11th Cir.1991).

III. THE STATE LAW CLAIMS

In their amended complaint, the plaintiff states assert that the same facts establishing liability under §§ 1 and 2 of the Sherman Act mandate a finding of liability under analogous provisions in their own laws. The Court agrees. The facts proving that Microsoft unlawfully maintained its monopoly power in violation of § 2 of the Sherman Act are sufficient to meet analogous elements of causes of action arising under the laws of each plaintiff state.[7] The Court reaches the same conclusion with respect to the facts establishing that Microsoft attempted to monopolize the browser market in violation of § 2,[8] and with respect to those facts establishing that Microsoft instituted an improper tying arrangement in violation of § 1.[9]

7. *See* Cal. Bus. & Prof.Code §§ 16720, 16726, 17200 (West 1999); Conn. Gen.Stat. § 35–27 (1999); D.C.Code § 28–4503 (1996); Fla. Stat. chs. 501.204(1), 542.19 (1999); 740 Ill. Comp. Stat. 10/3 (West 1999); Iowa Code § 553.5 (1997); Kan. Stat. §§ 50–101 *et seq.* (1994); Ky.Rev.Stat. §§ 367.170, 367.175 (Michie 1996); La.Rev.Stat. §§ 51:123, 51:1405 (West 1986); Md. Com. Law II Code Ann. § 11–204 (1990); Mass. Gen. Laws ch. 93A, § 2; Mich. Comp. Laws § 445.773 (1989); Minn.Stat. § 325D.52 (1998); N.M. Stat. § 57–1–2 (Michie 1995); N.Y. Gen. Bus. Law § 340 (McKinney 1998); N.C. Gen.Stat. §§ 75–1.1, 75–2.1 (1999); Ohio Rev.Code §§ 1331.01, 1331.02 (Anderson 1993); Utah Code § 76–10–914 (1999); W.Va.Code § 47–18–4 (1999); Wis. Stat. § 133.03(2) (West 1989 & Supp.1998).

8. *See* Cal. Bus. & Prof.Code § 17200 (West 1999); Conn. Gen.Stat. § 35–27 (1999); D.C.Code § 28–4503 (1996); Fla. Stat. chs. 501.204(1), 542.19 (1999); 740 Ill. Comp. Stat. 10/3(3) (West 1999); Iowa Code § 553.5 (1997); Kan. Stat.§§ 50–101 *et seq.* (1994); Ky.Rev.Stat. §§ 367.170, 367.175 (Michie 1996); La.Rev.Stat.§§ 51:123, 51:1405 (West 1986); Md. Com. Law II Code Ann. § 11–204(a)(2) (1990); Mass. Gen. Laws ch. 93A, § 2; Mich. Comp. Laws § 445.773 (1989); Minn.Stat. § 325D.52 (1998); N.M. Stat. § 57–1–2 (Michie 1995); N.Y. Gen. Bus. Law § 340 (McKinney 1988); N.C. Gen.Stat. §§ 75–1.1, 75–2.1 (1999); Ohio Rev.Code §§ 1331.01, 1331.02 (Anderson 1993); Utah Code § 76–10–914 (1999); W.Va.Code § 47–18–4 (1999); Wis. Stat. § 133.03(2) (West 1989 & Supp.1998).

9. *See* Cal. Bus. & Prof.Code § 16727, 17200 (West 1999); Conn. Gen.Stat. §§ 35–26, 35–29 (1999); D.C.Code § 28–4502 (1996); Fla. Stat. chs. 501.204(1), 542.18 (1999); 740 Ill. Comp. Stat. 10/3(4) (West 1999); Iowa Code § 553.4 (1997); Kan. Stat. §§ 50–101 *et seq.* (1994); Ky.Rev.Stat. §§ 367.170, 367.175 (Michie 1996); La.Rev.Stat. §§ 51:122, 51:1405 (West 1986); Md. Com. Law II Code Ann. § 11–204(a)(1) (1990); Mass. Gen. Laws ch. 93A, § 2; Mich. Comp. Laws § 445.772 (1989); Minn.Stat. § 325D.52 (1998); N.M. Stat.§ 57–1–1 (Michie 1995); N.Y. Gen. Bus. Law § 340 (McKinney 1988); N.C. Gen.Stat. §§ 75–1.1, 75–2.1 (1999); Ohio Rev.Code §§ 1331.01, 1331.02 (Anderson 1993); Utah Code § 76–10–914 (1999); W.Va.Code § 47–18–3 (1999); Wis. Stat. § 133.03(1) (West 1989 & Supp.1998).