IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA, Plaintiff, v. MICROSOFT CORPORATION, Defendant.	Civil Action No. 98-1232 (TPJ)
STATE OF NEW YORK *ex rel.* Attorney General ELIOT SPITZER, *et al.*, Plaintiffs, v. MICROSOFT CORPORATION, Defendant.	Civil Action No. 98-1233 (TPJ)

PLAINTIFFS' JOINT PROPOSED CONCLUSIONS OF LAW

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TABLE OF CONTENTS

TABLE OF AUTHORITIES iv

STATEMENT 1

ARGUMENT 1

THIS COURT'S FINDINGS OF FACT ESTABLISH MULTIPLEVIOLATIONS OF THE SHERMAN ACT BY MICROSOFT 1

I. MICROSOFT VIOLATED SECTION 2 OF THE SHERMAN ACT BY UNLAWFULLY MAINTAINING ITS MONOPOLY IN OPERATING SYSTEMS FOR INTEL-COMPATIBLE PERSONAL COMPUTERS 2

A. Microsoft Has Monopoly Power In The Market For Operating Systems For Intel-Compatible Personal Computers 3

1. Operating Systems For Intel-Compatible Personal Computers Constitute A Relevant Antitrust Market 3

2. Microsoft Has Monopoly Power In The Relevant Market 7

B. Microsoft Engaged In A Series Of Anticompetitive, Exclusionary, Predatory Acts To Maintain Its Monopoly 14

1. A Monopolist May Not Deliberately Take Actions That Erect Obstacles To Consumer Choice On The Merits Or Otherwise Make No Business Sense Except For Their Monopoly-Maintaining Effects 15

a. Basic Standards 15

b. Intent and Effect 19

c. The Conduct At Issue In This Case 21

2. After Seeking Netscape's Agreement Not To Threaten Its Monopoly, Microsoft Took Costly Actions That Impaired Consumer Choice, Lacked Legitimate Justification, And Served Simply To Maintain Microsoft's Monopoly By Stifling Netscape And Java 23

a. The Proposal And Pressure To Keep Netscape Out Of Platform Development 24

b. Exclusionary Actions Respecting Personal Computer Manufacturers 25

i. *Binding Internet Explorer to Windows* 27

ii. *Limiting OEM Control Over The Desktop And The Boot Sequence* 30

iii. *Pressure, Expenditures And Agreements To Favor Internet Explorer and Interfere with Distribution of Navigator* 32

c. Exclusionary Actions Respecting Internet Access And On-Line Service Providers 33

i. *Referral Server* 34

ii. *Online Services Folder* 34

d. Exclusionary Acts Respecting Internet Content Providers 36

e. Exclusionary Actions Respecting Independent Software Vendors And Apple 38

f. Spending And Foregoing Revenue To Build Explorer Usage Share To Protect The Applications Barrier 40

3. Microsoft Took Other Anticompetitive Actions To Interfere With The Distribution And Development Of Cross-Platform Java 43

a. Failing To Warn And Confusing Developers About The Creation Of Microsoft-Specific Extensions To Java 44

. Pressuring And Coercing Third Parties Not To Support Cross-Platform Java Implementations 45

. Microsoft's Browser and Java Actions Were Parts Of A Multi-Front Campaign To Impede Cross-Platform Middleware By Means Of Threats That Restricted Consumer Choice 47

a. Microsoft Took Anticompetitive Actions To Interfere With Intel's Plans For Platform-Level Software 47

. Microsoft Took Anticompetitive Actions To Interfere With The Development Or Distribution Of Cross-Platform Middleware By Other Firms 49

5. Microsoft's Conduct Was Anticompetitive Considered As A Whole 50

II. MICROSOFT VIOLATED SECTION 1 OF THE SHERMAN ACT BY UNLAWFULLY TYING A WEB BROWSER TO ITS OPERATING SYSTEM 53

A. Operating Systems And Browsers Are Separate Products 55

B. The Other Requirements For Per Se Condemnation Are Met 59

C. A Rule Of Reason Analysis Condemns Microsoft's Tying Arrangements 61

III. MICROSOFT VIOLATED SECTION 1 OF THE SHERMAN ACT BY ENTERING INTO NUMEROUS UNLAWFUL EXCLUSIONARY AGREEMENTS 62

IV. MICROSOFT ATTEMPTED TO MONOPOLIZE THE BROWSER MARKET 66

CONCLUSION 70

TABLE OF AUTHORITIES

CASES

Advanced Health-Care Serv's. v. Radford Community Hospital, 910 F.2d 139 (4th Cir. 1990) 18, 40

American Ad Mgmt., Inc. v. GTE Corp., 92 F.3d 781 (9th Cir. 1996) 62

Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985) . . . . passim

Association for Intercollegiate Athletics for Women v. NCAA, 735 F.2d 577 (D.C. Cir. 1984) 8, 19, 62, 67

Atlantic Richfield Co. v. USA Petroleum Co., 495 U.S. 328 (1990) 63

Ball Memorial Hospital, Inc. v. Mutual Hospital Insurance, Inc., 784 F.2d 1325 (7th Cir. 1986) 8, 9

Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227 (1st Cir.1983) 17, 43, 64

Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263 (2d Cir. 1979), cert. denied, 444 U.S. 1093 (1980) 18, 40

Brooke Group Ltd. v. Brown & Williamson Tobacco Corp, 509 U.S. 209 . . . . 18, 43, 65

C.E. Serv's., Inc. v. Control Data Corp., 759 F.2d 1241 (5th Cir. 1985) 18

California Dental Association v. FTC, 119 S. Ct. 1604 (1999) 63

Caribbean Broadcasting System, Ltd. v. Cable & Wireless PLC, 148 F.3d 1080 (D.C. Cir. 1998) 15

Chicago Board of Trade v. United States, 246 U.S. 231 (1918) 19, 62

City of Anaheim v. Southern California Co., 955 F.2d 1373 (9th Cir. 1992) 51

City of Mishawaka v. American Electric Power Co. Inc., 616 F.2d 976 (7th Cir. 1980) 51

Coastal Fuels of Puerto Rico, Inc. v. Caribbean Petroleum Corp., 79 F.3d 182 (1st Cir. 1996) 4

Conoco Inc. v. Inman Oil Co., 774 F.2d 895 (8th Cir. 1985) 67

Continental Ore Co. v. Union Carbide & Carbon Corp., 370 U.S. 690 (1962) 50, 51, 65

Continental T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36 (1977) 62, 63

Data General Corp. v. Grumman Syst. Support Corp., 36 F.3d 1147 (1st Cir. 1994) 17

DIAL A CAR, INC. v. Transportation, Inc. and Barwood, Inc., 82 F.3d 484 67

Digidyne Corp. v. Data General Corp., 734 F.2d 1336 (9th Cir. 1984) 59

Eastman Kodak Co. v. Image Technical Services, Inc., 504 U.S. 451 (1992) 2, 3, 4, 7, 8, 21, 27, 53, 54, 55, 60, 65

Eastman Kodak Co. v. Southern Photo Materials Co., 273 U.S. 359 (1927) 20

FTC v. Elders Grain, Inc., 868 F.2d 901 (7th Cir. 1989) 9

FTC v. Indiana Federation of Dentists, 476 U.S. 447 (1986) 63

FTC v. Procter & Gamble Co., 386 U.S. 568 (1967) 22

Fortner Enterprises, Inc. v. United States Steel Corp., 394 U.S. 495 (1969) 59

Foster v. Maryland State Sav's. & Loan Association, 590 F.2d 928 (D.C. Cir. 1978) 54

GAF v. Eastman Kodak Co., 519 F. Supp. 1203 (S.D.N.Y. 1981) 30

General Industrial Corp. v. Hartz Mountain Corp., 810 F.2d 795 (8th Cir. 1987) 18, 69

Grappone, Inc. v. Subaru of New England, Inc., 858 F.2d 792 (1st Cir. 1988) 57, 61

Great Western Directories v. Southwestern Bell Telegraph, 63 F.3d 1378 (5th Cir. 1995), modified, 74 F.3d 613, vacated pursuant to settlement agreement (Aug. 21, 1996), cert. dismissed, 518 U.S. 1048 (1996) 18, 40

Home Placement Service, Inc. v. Providence Journal Co., 682 F.2d 274 (1st Cir. 1982) 3, 17, 19

Instructional Syst. Devel. Corp. v. Aetna Casualty & Surety Co., 817 F.2d 639 (10th Cir. 1987) 17

Interface Group v. Massachusetts Port Authority, 816 F.2d 9 (1st Cir. 1987) 64

Intergraph Corp. v. Intel Corp., 1999 WL 1000717 (Fed. Cir. 1999) 50

International Travel Arrangers, Inc. v. Western Airlines, Inc., 623 F.2d 1255 (8th Cir.), cert. denied, 449 U.S. 1063 (1980) 19

Jefferson Parish Hospital District No. 2 v. Hyde, 466 U.S. 2 (1984) 54, 55, 56, 61

Kreuzer v. American Acad. of Periodontology, 735 F.2d 1479 (D.C. Cir. 1984) 62

Kumho Tire Co., Ltd. v. Carmichael, 119 S. Ct. 1167 (1999) 57

Litton Systems, Inc. v. AT&T, 700 F.2d 785 (2d Cir. 1983), cert. denied, 464 U.S. 1073 (1984) 50

Lorain Journal Co. v. United States, 342 U.S. 143 (1951) 18, 20

M&M Medical Supplies & Service v. Pleasant Valley Hospital, 981 F.2d 160 (4th Cir. 1992) 68

McGahee v. Northern Propane Gas Co., 858 F.2d 1487 (11th Cir. 1988) 69

Multiflex, Inc. v. Samuel Moore & Co., 709 F.2d 980 (5th Cir. 1983) 69

Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal and Professional Publications, Inc., 63 F.3d 1540 (10th Cir. 1995), cert. denied, 516 S. Ct. 1044 (1996) 17, 27, 54, 56, 61

NCAA v. Board of Regents, 468 U.S. 85 (1984) 7, 63

Nash v. United States, 229 U.S. 373 (1913) 64

National Society of Prof. Eng'rs v. United States, 435 U.S. 679 (1978) 22, 62, 63

Neumann v. Reinforced Earth Co., 786 F.2d 424 (D.C. Cir. 1986), cert. denied, 479 U.S. 851 (1986) 18

Northern Pacific Railway Co. v. United States, 356 U.S. 1 (1958) 53

Oahu Gas Service, Inc. v. Pacific Resources Inc., 838 F.2d 360 (9th Cir.), cert. denied, 488 U.S. 870 (1988) 7

Oetiker v. Werke, 556 F.2d 1 (D.C. Cir. 1977) 67

Omega Environmental, Inc. v. Gilbarco, Inc., 127 F.3d 1157 (9th Cir. 1997), cert. denied, 119 S. Ct. 46 (1998) 64

Otter Tail Power Co. v. United States, 410 U.S. 366 (1973) 22

Palmer v. BRG of Georgia, Inc., 498 U.S. 46 (1990) 62

Reazin v. Blue Cross & Blue Shield of Kansas, Inc., 899 F.2d 951 (10th Cir. 1990), cert. denied, 497 U.S. 1005 (1990) 7, 18, 40

Rebel Oil Co. v. Atlantic Richfield Co., 51 F.3d 1421 (9th Cir.), cert. denied, 516 U.S. 987 (1995) 4, 8

Rothery Storage & Van Co. v. Atlas Van Lines, 792 F.2d 210 (D.C. Cir. 1986), cert. denied, 479 U.S. 1033 (1987) 3, 4, 7

Ryko Manufacturing Co. v. Eden Services, 823 F.2d 1215 (8th Cir. 1987), cert. denied, 484 U.S. 1026 (1988) 8

SBC Communications, Inc. v. FCC, 56 F.3d 1484 (D.C. Cir. 1995) 4

Service & Training, Inc. v. Data General Corp., 963 F.2d 680 (4th Cir. 1992) 56

Smith v. Pro-Football, Inc., 593 F.2d 1173 (D.C. Cir. 1978) 62

Southern Pacific Co. v. AT&T, 740 F.2d 980 (D.C. Cir. 1984) 7, 8, 57

Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447 (1993) 66, 67

Standard Oil Co. v. United States, 221 U.S. 1 (1911) 62

State Oil Co. v. Khan, 118 S. Ct. 275 (1997) 62

Stearns Airport Equipment Co., Inc. v. FMC Corp., 170 F.3d 518 (5th Cir. 1999) 18

Sullivan v. NFL, 34 F.3d 1091 (1st Cir. 1994), cert. denied, 513 U.S. 1190 (1995) 63

Swift & Co. v. United States, 196 U.S. 375 (1905) 67

Syufy Enterprises v. American Multicinema, Inc., 783 F.2d 878 (9th Cir. 1986) 8

Tampa Electric Co. v. Nashville Coal Co., 365 U.S. 320 (1961) 4, 62, 64

Times-Picayune Publ'g Co. v. United Sates, 345 U.S. 594 (1953) 61

Tops Markets, Inc. v. Quality Markets, Inc., 142 F.3d 90 (2d Cir. 1998) 7

U.S. Anchor Manufacturing, Inc. v. Rule Industries, Inc., 7 F.3d 986 (11th Cir. 1993) 3

U.S. Healthcare, Inc. v. Healthsource, Inc., 986 F.2d 589 (1st Cir. 1993) 3, 19, 64

United States v. AT&T, 524 F. Supp. 1336 (D.D.C. 1981) 4, 50

United States v. Alcoa, 148 F.2d 416, 432 (2d Cir. 1945) 15, 20

United States v. American Airlines, Inc., 743 F.2d 1114 (5th Cir. 1984) 18, 25

United States v. Baker Hughes Inc., 908 F.2d 981 (D.C. Cir. 1990) 7

United States v. Crescent Amusement Co., 323 U.S. 173 (1944) 18

United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377 (1956) 3, 7, 68

United States v. Griffith, 334 U.S. 100 (1948) 2

United States v. Grinnell Corp., 384 U.S. at 570-71 . . . . 2, 15

United States v. Loew's Inc., 371 U.S. 38 (1962) 59

United States v. Microsoft Corp., 147 F.3d 935 (D.C. Cir. 1998) 56

United States v. Microsoft Corp., 1998 WL 614485 (D.D.C. 1998) . . . . passim

United States v. Philadelphia National Bk., 374 U.S. 321 (1963) 22

United States v. Rockford Memorial Corp., 898 F.2d 1278 (7th Cir.), cert. denied, 498 U.S. 920 (1990) 7

United States v. Socony-Vacuum Oil Co., 310 U.S. 150 (1940) 61, 62, 64

United States v. Syufy Enterprises, 903 F.2d 659 (9th Cir. 1990) 69

United States v. Topco Associates, Inc., 405 U.S. 596 (1972) 62

United States v. United Shoe Machinery Co., 110 F. Supp. 295 (D. Mass. 1953), aff'd, 347 U.S. 521 (1954) 18

United States v. United States Gypsum Co., 438 U.S. 422 (1978) 19

United States v. United Tote, Inc., 768 F. Supp. 1064 (D. Del. 1991) 9

Zauderer v. Office of Disciplinary Counsel, 471 U.S. 626 (1985) 57

STATUTES

15 U.S.C. § 1 . . . . passim

15 U.S.C. § 2 . . . . passim

TREATISES

IIA P. Areeda, Antitrust Law ¶ 570b1 (1995) 64

IIIA P. Areeda & H. Hovenkamp, Antitrust Law ¶ 760b6 (1996) 61, 66, 69

III P. Areeda & D. Turner, Antitrust Law 78 (1978) 16

X P. Areeda, E. Elhauge, & H. Hovenkamp, Antitrust Law
¶ 1746b (1996) 56

STATEMENT

This Court's detailed findings of fact, issued November 5, 1999, describe Microsoft's monopoly power; Microsoft's recognition of the threat posed by Netscape Navigator, cross-platform Java, and other middleware to the applications barrier to entry supporting that power; Microsoft's determined efforts to beat back that threat, and thus keep the entry barrier high, not by simply offering consumers improved or more easily available products, but by a host of costly exclusionary actions that both directly and indirectly limited consumer choices; and Microsoft's substantial success in limiting browser and other middleware competition and thus in preserving the entry barrier that protects its monopoly power. Those facts are not repeated in full here. Rather, in proposing conclusions of law based on the November 5 findings, this brief summarizes in each section of the legal analysis enough of the pertinent findings to show that the particular element of the legal violation has been established.

ARGUMENT

THIS COURT'S FINDINGS OF FACT ESTABLISH MULTIPLE VIOLATIONS OF THE SHERMAN ACT BY MICROSOFT

The findings of fact issued by the Court on November 5, 1999, establish that Microsoft violated the Sherman Act in at least four ways. First, and most comprehensively, Microsoft violated Section 2 of the Sherman Act, 15 U.S.C. § 2, through a host of actions that illegally maintained the critical barrier to entry into, and hence its monopoly in, the market for operating systems for Intel-compatible personal computers. Second, Microsoft's several related means of illegally tying a web browser to its operating system violated Section 1 of the Sherman Act, 15 U.S.C. § 1. Third, Microsoft also violated Section 1 of the Sherman Act when it entered into a variety of illegally exclusionary agreements with personal computer manufacturers, with Internet access and on-line service providers, and with Internet content providers. Finally, Microsoft's anticompetitive campaign to impair Navigator's competitive access to consumers constituted an unlawful attempt to monopolize the browser market in violation of Section 2 of the Sherman Act.

These claims, though legally distinct, are closely related. The tying agreements and exclusionary agreements violate Section 1, but they are also part of the pattern of acts that violate Section 2 and would, indeed, be illegal monopolizing acts under Section 2 even if not illegal restraints of trade under Section 1. This Court should conclude that Microsoft's actions violate both Section 2 and Section 1 of the Sherman Act and proceed to consideration of appropriate remedies.

. MICROSOFT VIOLATED SECTION 2 OF THE SHERMAN ACT BY UNLAWFULLY MAINTAINING ITS MONOPOLY IN OPERATING SYSTEMS FOR INTEL-COMPATIBLE PERSONAL COMPUTERS

Section 2 of the Sherman Act prohibits a firm with monopoly power from maintaining that monopoly power through means that go beyond competition on the merits. "'The offense of monopoly under § 2 of the Sherman Act has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.'" Eastman Kodak Co. v. Image Technical Services, Inc., 504 U.S. 451, 480 (1992) (quoting United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966)); see Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 596 n.19 (1985); United States v. Griffith, 334 U.S. 100, 107 (1948) ("The anti-trust laws are as much violated by the prevention of competition as by its destruction."). Under those settled principles of monopolization law, Microsoft's multiple actions to repel promising efforts to lower the critical barrier to entry into its monopoly market constitute unlawful maintenance of a monopoly. This is a classic example of a case "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 competition and thereby sustain or extend the defendant's agglomeration of power." Eastman Kodak, 504 U.S. at 488 (Scalia, J., dissenting).[1]

. Microsoft Has Monopoly Power In The Market For Operating Systems For Intel-Compatible Personal Computers

[1]The interstate commerce requirements of both Section 1 and Section 2 are plainly met in this case and are not hereafter mentioned.

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Operating Systems For Intel-Compatible Personal Computers Constitute A Relevant Antitrust Market

a. The "market [in which the defendant participates] is composed of products that have reasonable interchangeability," in the eyes of consumers, with what the defendant sells. See United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 404 (1956); see also Eastman Kodak, 504 U.S. at 482. The assessment takes account of the factors that influence consumer choices, including product function, price, and quality (du Pont, 351 U.S. at 404); but the object of the inquiry in defining the market is to identify the range of substitutes relevant to determining the degree, if any, of the defendant's market power. Rothery Storage & Van Co. v. Atlas Van Lines, 792 F.2d 210, 218-19 (D.C. Cir. 1986), cert. denied, 479 U.S. 1033 (1987); see also Eastman Kodak, 504 U.S. at 469 n.15; U.S. Anchor Mfg., Inc. v. Rule Industries, Inc., 7 F.3d 986, 995-96 (11th Cir. 1993); U.S. Healthcare, Inc. v. Healthsource, Inc., 986 F.2d 589, 598-99 (1st Cir. 1993); Home Placement Service, Inc. v. Providence Journal Co., 682 F.2d 274, 280 (1st Cir. 1982). Accordingly, for goods or services to be in the same market as the defendant's, substitutability in the eyes of consumers (who may consider function, price, quality, etc.) must be sufficiently great that the defendant's charging of supracompetitive prices for its product would drive away not just some consumers but a large enough number to make such pricing unprofitable (and hence induce the defendant to restore the competitive price). See du Pont, 351 U.S. at 394-95; Rothery, 792 F.2d at 218. In other words, a properly defined market is broad enough if a hypothetical profit-maximizing firm selling all of the product in that market would charge significantly more than a competitive price, i.e., without losing too many sales to other products to make its price unprofitable. See, e.g., Coastal Fuels of Puerto Rico, Inc. v. Caribbean Petroleum Corp., 79 F.3d 182, 197, 198 (1st Cir. 1996); Rebel Oil Co. v. Atlantic Richfield Co., 51 F.3d 1421, 1434 (9th Cir.), cert. denied, 516 U.S. 987 (1995).

The geographic area to which consumers seeking such a product could practicably turn to acquire substitutes is also part of the market definition. See, e.g., Tampa Elec. Co. v. Nashville Coal Co., 365 U.S. 320, 327 (1961). In addition, though less significant in practical terms, courts have traditionally examined, as part of market definition, what firms that are not currently

selling the particular product could not only become participants in the market but could do so readily enough to render unprofitable any nontransitory supracompetitive pricing by current market participants. See, e.g., SBC Communications, Inc. v. FCC, 56 F.3d 1484, 1493-94 (D.C. Cir. 1995); Rothery, 792 F.2d at 218; Rebel Oil, 51 F.3d at 1436; United States v. AT&T, 524 F. Supp. 1336, 1375-76 n.163 (D.D.C. 1981).[2] All of these inquiries require examination of the "economic reality of the market." Eastman Kodak, 504 U.S. at 467.

b. This Court's findings readily establish a properly defined market for operating systems for Intel-compatible personal computers world-wide. ¶¶ 18-32. The Court found that there are no present or near-term products that a significant number of consumers could substitute for such operating systems without substantial costs; that new entrants could not introduce a product that "would, within a reasonably short period of time, present a significant percentage of consumers with a viable alternative;" and that, therefore, if one firm controlled all such operating systems, it could profitably "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." ¶ 18. Those ultimate findings define a relevant market for purposes of antitrust analysis.

The Court based its ultimate market-definition findings on detailed supporting findings of the lack of economically adequate demand substitutability (¶¶ 19-29) and supply substitutability (¶¶ 30-32). On the demand side, the Court examined server software (¶ 19), Apple and other non-Intel-compatible software (¶¶ 20-21), information appliances like wireless phones (¶¶ 22-23), "thin client" network computers (¶¶ 24-26), other means of accessing server-based computing applications (¶ 27), and middleware like browsers or Java class libraries that can serve as platforms by exposing application programming interfaces (APIs) (¶¶ 28-29). Examining the real (and limited) choices presented to most consumers by these purported

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[2]Decisions of the Supreme Court and the D.C. Circuit (and some other courts), like this Court's findings (¶¶ 30-32), treat such supply responses as part of the market definition inquiry. It is also possible to treat entry by firms not currently selling a competitive product as a separate step of the ultimate inquiry into the ability to exercise market power. See 1992 Horizontal Merger Guidelines § 1.3. The difference in formulation makes no difference in this case.

alternatives to an Intel-compatible PC operating system, the Court found that none of these do today or will in the near future deprive "a firm controlling the licensing of all Intel-compatible PC operating systems [of the ability to] set prices substantially above competitive levels without losing an unacceptable amount of business." ¶ 23 (quotation specific to information appliances). The Court found this market definition to be appropriate in light of the limited possibility for competitively significant entry by firms not currently supplying an Intel-compatible PC operating system. The Court found that there is an "intractable 'chicken-and-egg' problem," i.e., that most consumers will buy an operating system only if "a large and varied set of high-quality, full-featured applications" exist, while writers of applications "do not want to invest in writing or quickly porting applications for an operating system until it is clear that there will be a sizeable and stable market for it." ¶ 30. This "applications barrier to entry," the Court found, "would make it prohibitively expensive for a new Intel-compatible operating system to attract enough developers and consumers to become a viable alternative to a dominant incumbent in less than a few years." ¶ 31. "It is highly unlikely, then, that a firm not already marketing an Intel-compatible PC operating system could begin marketing one that would, in less than a few years, present a significant percentage of consumers with a viable alternative to incumbents." ¶ 32. This analysis, like the ultimate finding of market definition it supports, reflects well established legal and economic principles of proper market definition.

The market-definition finding is wholly consistent with the findings that Microsoft recognized and reacted to Netscape's and others' "middleware threats." ¶¶ 68-78. Such middleware, Microsoft recognized, threatens the applications barrier because it is both valuable as a complement to the operating system and can expose APIs for developers to use in writing applications that may run on platforms other than Windows. ¶ 69. That platform role for middleware, however, does not transform it into a commercially meaningful substitute for a PC operating system. Consumers still must separately buy such an operating system to make their computers run. There is appropriately no finding that consumers view any of the middleware products at issue as interchangeable with an operating system, rather than as complements to an operating system, or that a monopolist of operating systems would be unable to set a

supracompetitive price for a significant period unless it also monopolized middleware. Under basic legal and economic standards of market definition, such middleware is not a viable commercial substitute, to which consumers would turn in place of an operating system, so as to belong in the same market.

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Microsoft Has Monopoly Power In The Relevant Market

a. The Supreme Court has long said that market power is the "power to control prices or exclude competition." duPont, 351 U.S. at 391; see Eastman Kodak, 504 U.S. at 481; id. at 464 ("ability of a single seller to raise price and restrict output"); NCAA v. Board of Regents, 468 U.S. 85, 109 n.38 (1984) ("Market power is the ability to raise prices above those that would be charged in a competitive market."); see also United States v. Rockford Memorial Corp., 898 F.2d 1278, 1283 (7th Cir.), cert. denied, 498 U.S. 920 (1990) (market power is power "to increase price above the competitive level without losing so much business to other suppliers as to make the price increase unprofitable"). The Court, while sometimes equating "market power" with "monopoly power," more recently has said that "[m]onopoly power under § 2 requires . . . something greater than market power under § 1." Eastman Kodak, 504 U.S. at 481. Monopoly power "is commonly thought of as 'substantial' market power." Reazin v. Blue Cross & Blue Shield of Kansas, Inc., 899 F.2d 951, 967 (10th Cir. 1990), cert. denied, 497 U.S. 1005 (1990); see Eastman Kodak, 504 U.S. at 488 (Scalia, J., dissenting).

The question of monopoly power is a factual one, to be decided based on consideration of any market characteristics that are in fact pertinent to the substantive inquiry into power over price or competition. See, e.g., Eastman Kodak, 504 U.S. at 481; Southern Pacific Co. v. AT&T, 740 F.2d 980, 1002 (D.C. Cir. 1984); Tops Markets, Inc. v. Quality Markets, Inc., 142 F.3d 90, 98 (2d Cir. 1998); Oahu Gas Service, Inc. v. Pacific Resources Inc., 838 F.2d 360, 363 (9th Cir.), cert. denied, 488 U.S. 870 (1988); cf. United States v. Baker Hughes Inc., 908 F.2d 981 (D.C. Cir. 1990) (same for anticompetitive effects inquiry under Section 7 of the Clayton Act). Evidence of the perceptions and behavior of market participants may be critical in establishing the degree of competitive discipline on the defendant. See Rothery, 792 F.2d at 219 n.4

("economic actors usually have accurate perceptions of economic realities"). Evidence of market share and entry barriers, however, has most commonly been central to the market-power analysis.

While market power "ordinarily is inferred from the seller's possession of a predominant share of the market" (Eastman Kodak, 504 U.S. at 464 (emphasis added)), monopoly power has generally been inferred from somewhat larger market shares, with a market share of 80-95% easily sufficient. Eastman Kodak, 504 U.S. at 481 (citing NCAA, 468 U.S. at 112; Grinnell, 384 U.S. at 571 ("87% of the market is a monopoly"); and American Tobacco Co. v. United States, 328 U.S. 781, 797 (1946) ("over two-thirds of the market is a monopoly")) (quotes in parentheticals by Supreme Court in Eastman Kodak); see Southern Pacific, 740 F.2d at 1000 ; Ass'n for Intercollegiate Athletics for Women v. NCAA, 735 F.2d 577, 584 n.10 (D.C. Cir. 1984). At least in the absence of exceptional countervailing circumstances, monopoly power exists when market share is sufficiently high and there are significant enough barriers to entry or expansion that the defendant can charge supracompetitive prices without loss of so many customers that the pricing becomes unprofitable. See, e.g., Southern Pacific, 740 F.2d at 1001; Rebel Oil, 51 F.3d at 1438; Syufy Enters. v. American Multicinema, Inc., 783 F.2d 878, 883-84 (9th Cir. 1986); cf. Ryko Mfg. Co. v. Eden Servs., 823 F.2d 1215, 1232 (8th Cir. 1987), cert. denied, 484 U.S. 1026 (1988) (market power analysis); Ball Memorial Hospital, Inc. v. Mutual Hospital Insurance, Inc., 784 F.2d 1325, 1335-36 (7th Cir.1986) (same). Moreover, "[a]ny market condition that makes entry more costly or time-consuming and thus reduces the effectiveness of potential competition as a constraint on the pricing behavior of the dominant firm should be considered a barrier to entry . . . ." Southern Pacific, 740 F.2d at 1001; see id. at 1001-02 (describing entry barriers and approving United States v. AT & T, 524 F. Supp. 1336, 1347-48 (D.D.C.1981)). In particular, the longer the time needed for any price-disciplining entry, the less the constraint on present power. See, e.g., FTC v. Elders Grain, Inc., 868 F.2d 901, 905 (7th Cir. 1989); Ball Memorial Hospital, 784 F.2d at 1335; United States v. United Tote, Inc., 768 F. Supp. 1064, 1080 (D. Del. 1991).

b. This Court's findings establish that Microsoft has monopoly power under those settled standards. ¶¶ 33-67. This Court found that "Microsoft enjoys so much power" in the defined market "that if it wished to exercise this power solely in terms of price, it could charge a price for Windows substantially above" a competitive-market price and "could do so for a significant period of time without losing an unacceptable amount of business to competitors." ¶ 33. The Court then expressly found: "In other words, Microsoft enjoys monopoly power in the relevant market." ¶ 33. In support of this finding, the Court focused on "three main facts:" first, Microsoft's "share of the market . . . is extremely large and stable;" second, Microsoft's share "is protected by a high barrier to entry;" and third, "largely as a result of that barrier, Microsoft's customers lack a commercially viable alternative to Windows." ¶ 34. This analysis comports with settled legal and economic principles for determining monopoly power.

c. The detailed supporting findings likewise reflect proper analysis of the presence and degree of market power. First, Microsoft possesses "a dominant, persistent, and increasing share" of the market, namely, at least 90 percent since 1990 and even higher more recently. ¶ 35. Moreover, "[e]ven if Apple's Mac OS were included in the relevant market, Microsoft's share would still stand well above eighty percent." ¶ 35. These are classic monopoly shares.

Second, the market is protected by the substantial "applications barrier to entry" (a barrier to both entry by new firms and expansion by current competitors), which "prevents Intel-compatible PC operating systems other than Windows from attracting significant consumer demand[] and . . . would continue to do so even if Microsoft held its prices substantially above the competitive level." ¶ 36. This barrier to entry rests on consumer demand for an operating system for which numerous and varied applications are already available and are reasonably expected to continue to be available, on the high sunk costs of writing applications software or of porting it to a new operating system and the resulting tendency of applications writers to write first and often solely for the overwhelmingly dominant user base of Windows, and on the "positive feedback" or "network effects" consequence of further reinforcing Windows' dominance and the tendency to attract more applications. ¶¶ 37-39. Potential rival operating

systems may attract a few applications in "major categories" (¶ 42), but it remains "prohibitively expensive" to attract the range of applications -- in number, "variety, choice, and currency" -- required to make the new operating system "an acceptable substitute for Windows" (¶ 40; see ¶ 41). These costs exceed the costs Microsoft itself faced, "for Microsoft never confronted a highly penetrated market dominated by a single competitor" (¶ 43); and, while Microsoft spends "substantial resources" to induce the writing of new applications for new versions of Windows, "the company does not face any obstacles nearly as imposing as the barrier to entry that vendors and would-be vendors of other PC operating system must overcome." ¶ 44; see ¶ 43 ("given that Windows today enjoys overwhelmingly more applications support than any other PC operating system, it would still take [a] competitor years to develop the necessary momentum").

The reality and strength of the barrier to entry are supported not just by economic logic but by the experience of the industry. ¶¶ 45-50. IBM could not make substantial headway with OS/2 Warp, despite heavy expenditures on applications. ¶ 46. Apple has not presented "a significant percentage of users with a viable substitute for Windows," despite an inventory of "more than 12,000 applications." ¶ 47. Fringe operating systems, though they may survive and even make a profit, have not "draw[n] a significant percentage of consumers away from Windows." ¶ 48. In particular, Be offers an operating system largely as a complement to Windows, not a substitute for it, and thus occupies a small niche and is not likely "to replace Windows on a significant number of PCs." ¶ 49. Similarly, while the number of Linux users is substantially larger than Be's, the majority run Linux on servers, not on personal computers; and "consumers have by and large shown little inclination to abandon Windows, with its reliable developer support, in favor of an operating system whose future in the PC realm is unclear." ¶ 50.

The applications barrier to entry has not been substantially lowered by the existence of "open-source" software developers who write applications pro bono publico (¶ 51) or by the theoretical possibility that an operating-system developer might try to "clone" the APIs exposed by Windows so that its operating system would run all Windows applications (¶ 52). In particular, adequate cloning is "virtually impossible" in practice, because "cloning the thousands

of APIs already exposed by Windows would be an enormously expensive undertaking" and "Microsoft continually adds APIs;" cloning is thus "such an expensive, uncertain undertaking that it fails to present a practical option for a would-be competitor to Windows." ¶ 52. Further, as this Court's later findings make clear, the applications barrier to entry has not been erased or eroded by middleware such as Navigator and Sun's Java technologies. Those products, because they expose APIs that could make possible non-Windows or cross-platform applications, hold the potential to do so and, for that reason, threaten Microsoft's monopoly. ¶¶ 68-78. "Nevertheless, these middleware technologies have a long way to go before they might imperil the applications barrier to entry" because as they still expose only a small fraction of the APIs exposed by Windows. ¶ 77.

Third, in addition to persistent overwhelming share and high entry barriers, this Court's findings properly rely on "the sustained absence of realistic commercial alternatives to Microsoft's PC operating-system products." ¶ 53. Personal computer manufacturers (OEMs) are subject to "intense" competition and "pay particularly close attention to consumer demand," and they "uniformly are of a mind that there exists no commercially viable alternative to which they could switch in response to a substantial and sustained price increase or its equivalent by Microsoft" (¶ 54) and "believe that the likelihood of a viable alternative to Windows emerging any time in the next few years is too low to constrain Microsoft from raising prices or imposing other burdens on customers and users" (¶ 55). So, too, "other vendors of Intel-compatible PC operating systems do not view their own offerings as viable alternatives to Windows." ¶ 55. Thus, "Microsoft knows that OEMs have no choice but to load Windows, both because it has a good understanding of the market in which it operates and because OEMs have told Microsoft as much." ¶ 55.

The Court's findings set out at least two additional affirmative categories of support for the monopoly-power finding. One is Microsoft's pricing behavior: Microsoft set its own prices essentially without regard to its rivals' prices; Microsoft raised its price on Windows 95 when releasing the newer Windows 98, indicating lack of concern about non-Microsoft rivals to any Windows version; and Microsoft acknowledged internally a wide range of discretion over the

price it could charge for the Windows 98 upgrade (deciding to charge $89 while recognizing that it "could have charged $49" and still remain profitable, as far as the record shows). ¶¶ 62, 63. The other is Microsoft's anticompetitive practices. In particular, "over the course of several years, Microsoft took actions [described in the rest of this Court's Findings] that could only have been advantageous if they operated to reinforce monopoly power." ¶ 67. The record of Microsoft's pricing decisions and treatment of customers (both end users and firms selling complements to Windows like PCs, Internet access, and Internet content) strongly confirm the extraordinary weakness of market constraints on Microsoft.

d. This Court's findings also explain why other evidence does not, contrary to Microsoft's contentions, undermine the finding of monopoly power. The installed base of Windows users does not substantially affect Microsoft's power in selling Windows, partly because progress in PC hardware and lowering of PC prices have induced many new purchases and Microsoft bars transfer of an already installed copy of Windows to a new machine. ¶ 57. Nor is Microsoft "substantially constrained" by pirated versions of Windows, partly because Microsoft effectively reduces the numbers of new PCs sold without an installed operating system, thus effectively containing "the illegal secondary market." ¶ 58.

Similarly, although some still "nascent paradigms could oust the PC operating system from its position as the primary platform for applications development and the main interface between users and their computers," that potential "does not prevent Microsoft from enjoying monopoly power today." ¶ 60. A fortiori that possibility does not undermine the existence of monopoly power during the 1995-1998 period when Microsoft undertook the monopolizing actions at issue. With consumers not likely to turn to alternatives "in appreciable numbers any time in the next few years," even today Microsoft "could keep its prices high for a significant period of time and still lower them in time to meet the threat of a new paradigm." ¶ 60.

Moreover, the fact that Microsoft "invests heavily in research and development," which can attract more customers and further delay the arrival of meaningful competition, is not inconsistent with monopoly power. ¶ 61. And the evidence does not permit a "confident determination" that Microsoft's Windows price is at all below one that "a profit-maximizing firm

with monopoly power would charge," let alone so far below as to undermine the otherwise-clear finding of monopoly power. ¶ 65. Even a monopolist may charge "what seems like a low short-term price in order to maximize its profits in the future for reasons unrelated to underselling any incipient competitors," such as "stimulating the growth of the market" or "intensify[ing] the positive network effects that add to the impenetrability of the applications barrier to entry." ¶ 65. Indeed, Microsoft has, in some circumstances, foregone higher prices, and otherwise "expend[ed] a significant portion of its monopoly power . . . on imposing burdensome restrictions on its customers" in order to "augment and prolong the monopoly power." ¶ 66.

. Microsoft Engaged In A Series Of Anticompetitive, Exclusionary, Predatory Acts To Maintain Its Monopoly

Although Microsoft has often welcomed new software products that run on Windows, it recognized that the Internet and other developments gave rise in the mid-1990s to a new type of innovative "middleware" that had the potential to diminish the entry barrier that has protected its monopoly against meaningful competition since at least the early 1990s. Microsoft reacted to these middleware technologies with a consistent pattern of acts that can be understood only as a deliberate scheme to ensure that its own monopoly will persist. Deploying a wide variety of contractual, coercive, and other stratagems, and using its monopoly position to exploit other firms' dependency on it, Microsoft worked actively to prevent these innovations from reaching consumers. It is neither possible nor necessary to tell definitively whether any or all of the technologies retarded or destroyed by Microsoft would have led to the end of the Windows monopoly. They would, however, have lowered entry barriers, easing entry for new entrepreneurial competition, opening up new possibilities for innovation and future competition, and thus promoting consumer choice. Microsoft's numerous related actions to stifle such competitive developments and restrict consumer choice constituted unlawful monopolization.

A Monopolist May Not Deliberately Take Actions That Erect Obstacles To Consumer Choice On The Merits Or Otherwise Make No Business Sense Except For Their Monopoly-Maintaining Effects

"'Anticompetitive conduct' can come in too many different forms, and is too dependent upon context, for any court or commentator ever to have enumerated all the varieties." Caribbean Broadcasting System, Ltd. v. Cable & Wireless PLC, 148 F.3d 1080, 1087 (D.C. Cir. 1998). And the formulations used to identify unlawful anticompetitive conduct have varied in terminology if not in substance. The objects of inquiry, however, are clear. Equally clear is the illegality of Microsoft's conduct under any available formulation of the standards for monopolizing conduct.

a. Basic Standards. The second element of a Section 2 claim is the use of anticompetitive means "to foreclose competition, to gain a competitive advantage, or to destroy a competitor." Eastman Kodak, 504 U.S. at 482-83 (quoting United States v. Griffith, 334 U.S. 100, 107 (1948)). The Supreme Court has described this conduct element as prohibiting a monopolist's "scheme of willful acquisition or maintenance of monopoly power." Eastman Kodak at 483 (citing Grinnell, 384 U.S. at 570-71; Aspen, 472 U.S. at 600-05; United States v. Alcoa, 148 F.2d 416, 432 (2d Cir. 1945)). The Court has used the language of "exclusionary" or "anticompetitive" or "predatory" to label the unlawful conduct (Aspen, 472 U.S. at 602) and to distinguish it from the competition on the merits reflected in Grinnell's reference to "superior product, business acumen, or historic accident." 384 U.S. at 570-71 (quoted in Aspen, 472 U.S. at 596 n.19, and Eastman Kodak, 504 U.S. at 480); see also Eastman Kodak, 504 U.S. at 488 (Scalia, J., dissenting) (Section 2 condemns "exclusionary or anticompetitive" behavior).

The Court in Aspen stated that conduct is anticompetitive if the defendant "has been 'attempting to exclude rivals on some basis other than efficiency.'" 472 U.S. at 605 (quoting R. Bork, The Antitrust Paradox 138 (1978)). The Court directed its attention to the challenged conduct's "impact on consumers and whether it has impaired competition in an unnecessarily restrictive way." Id. at 605 (footnote omitted; emphasis added). The Court quoted with approval the definition from III P. Areeda & D. Turner, Antitrust Law 78 (1978):

> Thus, 'exclusionary' comprehends at the most 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.

Aspen, 472 U.S. at 605 n.32; see also III P. Areeda & H. Hovencamp, Antitrust Law 78 (Rev'd Ed. 1996). That standard properly asks whether the challenged conduct, first, tends to impair rivals' opportunities and, second, can be justified -- at all or in its full restrictive scope -- by "'valid business reasons.'" Eastman Kodak, 504 U.S. at 483 (quoting Aspen, 472 U.S. at 605). Such asserted justifications must be tested both for their "validity," assessed in light of (among other things) their consistency with the defendant's other conduct and assertions, and for their "sufficiency" to explain the full extent of the impact on rivals. Id.; see id. at 483-85.

Most recently, the Court in Eastman Kodak applied this approach to hold that a triable issue of monopolization was presented where there were reasons to doubt the validity and sufficiency of the asserted business justifications. 504 U.S. at 482-86. Previously, in Aspen, the Court applied the approach to uphold a jury finding of monopolization. The Court looked to three key factors -- "the effect of the challenged pattern of conduct on consumers;" its effect on the defendant's "smaller rival;" and its effect on "[the defendant] itself." 472 U.S. at 605. First, the conduct deprived consumers of arrangements they provably desired. Id. at 605-07. Second, the conduct inflicted "substantial" "pecuniary injury" on the smaller rival, which had to undertake "prohibitively expensive" efforts to try to meet consumer demand for the withdrawn arrangements. Id. at 607-08. Third, the conduct was costly to the defendant (the defendant "elected to forgo . . . short-run benefits"); and, because none of the asserted efficiency justifications could explain the conduct (considering particularly the defendant's other conduct that was inconsistent with the asserted justifications), it was reasonable to infer that the defendant "was not motivated by efficiency concerns and that it was willing to sacrifice short-run benefits and consumer good will in exchange for a perceived long-run impact on its smaller rival." Id. at 610-11 (footnote omitted).

These decisions thus focus on several closely related inquiries: whether the conduct is an effort to exclude rivals on some basis other than the defendant's own improved market performance, thus impeding rather than enabling or enriching consumer choice; whether the full

restrictive impact of the conduct on competition is justified as necessary to further legitimate goals of lowering prices, improving quality, or in other ways promoting or expanding consumer choice; and whether the conduct's costs to the defendant are ultimately inexplicable except on the basis of the monopoly returns expected as a result of the conduct's creation or maintenance of a monopoly. Court of appeals decisions reflect similar standards for distinguishing monopolizing conduct from competition on the merits.[3] Unilateral conduct, such as that at issue

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[3]Some decisions, following the Areeda formulation, focus on whether the defendant's conduct served a legitimate purpose or impaired the opportunity of rivals more than necessary to serve such a purpose. See, e.g., Data General Corp. v. Grumman Syst. Support Corp., 36 F.3d 1147, 1182 (1st Cir. 1994) (Areeda standard: "Exclusionary conduct is defined as conduct, other than competition on the merits or restraints reasonably necessary to competition on the merits, that reasonably appears capable of making a significant contribution to creating or maintaining monopoly power.") (internal quotation marks omitted); Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 230 (1st Cir.1983) (Breyer, J.) (same); Home Placement Service, 682 F.2d at 281 (irrespective of motive, "defendant's use of monopoly power to destroy a potential competitor" was illegal where "not supported by a legitimate business reason"); Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal and Professional Publications, Inc., 63 F.3d 1540, 1550 (10th Cir. 1995), cert. denied, 516 S. Ct. 1044 (1996) (Areeda standard); id. at 1553 n.12 (triable issue whether defendant's action "would disproportionately raise [competitor's] costs" and, if so, had "a legitimate business justification"); Instructional Syst. Devel. Corp. v. Aetna Casualty & Surety Co., 817 F.2d 639, 649 (10th Cir. 1987) ("Predatory practices are illegal if they impair the opportunities of rivals and are not competition on the merits or are more restrictive than reasonably necessary for such competition. . . . [T]he exclusionary conduct must appear reasonably capable of contributing significantly to creating or maintaining monopoly power."); C.E. Serv's., Inc. v. Control Data Corp., 759 F.2d 1241 (5th Cir. 1985) (Areeda standard).

Other decisions articulate standards that focus on whether the defendant's conduct makes business sense other than as a means of securing monopoly power. See, e.g., Neumann v. Reinforced Earth Co., 786 F.2d 424, 427 (D.C. Cir. 1986), cert. denied, 479 U.S. 851 (1986) ("predation 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."); Stearns Airport Equipment Co., Inc. v. FMC Corp., 170 F.3d 518, 524 (5th Cir. 1999) ("Aspen involved a company willingly accepting a real loss because it represented a relative gain."); Great Western Directories v. Southwestern Bell Tel., 63 F.3d 1378, 1386 (5th Cir. 1995), modified, 74 F.3d 613, vacated pursuant to settlement agreement (Aug. 21, 1996), cert. dismissed, 518 U.S. 1048 (1996) (described in Stearns, 170 F.3d at 524 n.3, as imposing Section 2 liability based on "conduct that harmed the monopolist and could only be understood when one recognized that competitors suffered more severe harm," i.e., "raising defendant's costs but inflicting more pain on its cash-starved competitor"); Advanced Health-Care Serv's. v. Radford Community Hosp., 910 F.2d 139, 148 (4th Cir. 1990) ("if a plaintiff shows that a defendant has harmed consumers and competition by making a short-term sacrifice in order to further its exclusive, anti-competitive objectives, it has shown predation by that defendant"); General Indus. Corp. v. Hartz Mountain Corp., 810 F.2d 795, 803 (8th Cir. 1987) (act is anticompetitive if "anticipated benefits [are] dependent on its tendency to discipline

in Aspen, as well as exclusive, preferential, restrictive, or otherwise exclusionary contracts, especially when coercively imposed by use of monopoly power, can constitute the requisite anticompetitive acts.[4]

b. Intent and Effect. These basic monopolization standards embody three important principles about the roles of intent and effect in separating competition on the merits from unlawful monopolizing conduct. First, while an intent to secure a monopoly is not "a separate and essential prerequisite to civil antitrust liability" (Ass'n for Intercollegiate Athletics for Women, 735 F.2d at 583),[5] the intent with which a defendant undertook an action is relevant to understanding the nature and economic consequences of the action. In particular, an intent to frustrate customer choice by excluding competition is telling evidence, from a presumptively knowledgeable market participant, that the act was not competition on the merits and made sense for the defendant only because it facilitated realization of monopoly returns. See Aspen, 472 U.S. at 602 ("the question of intent is relevant to both" actual and attempted monopolization; while a separate element of attempt, for monopolization "evidence of intent is merely relevant to

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or eliminate competition and thereby enhance the firms' long term ability to reap the benefits of monopoly power") (internal quotation marks omitted); Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 291 (2d Cir. 1979), cert. denied, 444 U.S. 1093 (1980) (action harming competition is unlawful "use of monopoly power" if it is "an action that a firm would have found substantially less effective, or even counterproductive, if it lacked market control"); see also Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 222 (1993) (even in an attempted-monopolization predatory-pricing case, "the essence of the claim" is that the defendant has priced its products "with an object to eliminate or retard competition and thereby gain and exercise control over prices in the relevant market").

[4]See, e.g., United States v. Crescent Amusement Co., 323 U.S. 173, 179, 181 (1944) (conspiracy to monopolize case; preferential contracts and coerced abandonment of plans to compete); Lorain Journal Co. v. United States, 342 U.S. 143 (1951) (attempt case; exclusive contracts); United States v. United Shoe Machinery Co., 110 F. Supp. 295 (D. Mass. 1953), aff'd, 347 U.S. 521 (1954) (restrictive agreements); Reazin, 899 F.2d at 973 (coerced agreements to avoid rivals); General Indus., 810 F.2d at 802-03 (coercively imposed restrictive agreements and refusal to deal); United States v. American Airlines, Inc., 743 F.2d 1114 (5th Cir. 1984) (attempt case; proposal to agree not to compete); Home Placement Service, supra (refusal to deal); International Travel Arrangers, Inc. v. Western Airlines, Inc., 623 F.2d 1255 (8th Cir.), cert. denied, 449 U.S. 1063 (1980) (deceptive practices).

[5]See Home Placement Service, 682 F.2d at 281 ("When the foreseeable and proximate consequence of defendant's conduct was unreasonably to perpetuate an already existing monopoly by excluding a potential competitor, it would be of no solace to plaintiff, or the consumers the anti-trust laws were designed to protect, that defendant may not have been seeking this result.").

the question whether the challenged conduct is fairly characterized as 'exclusionary' or 'anticompetitive' . . . or 'predatory'"); United States v. United States Gypsum Co., 438 U.S. 422, 436 n.13 (1978) ("consideration of intent may play an important role in divining the actual nature and effect of the alleged anticompetitive conduct"); Chicago Board of Trade v. United States, 246 U.S. 231, 238 (1918) ("knowledge of intent may help the court to interpret facts and to predict consequences"); Ass'n for Intercollegiate Athletics for Women, 735 F.2d at 583 (relevant "insofar as it helps predict the probable competitive impact of a disputed practice"); see U.S. Healthcare, Inc. v. Healthsource, Inc., 986 F.2d 589, 596 (1st Cir. 1993) (per Boudin, J.) ("Motive can, of course, be a guide to expected effects . . . .").

Second, no particular degree of already-suffered competitive harm is required to find unlawful monopolization where such harm can be predicted for the future. Indeed, the Supreme Court has repeatedly spoken of the monopolist's intent to monopolize, which can be readily inferred from exclusionary acts, as sufficient for an act to be a Section 2 violation.[6] See, e.g., Eastman Kodak, 504 U.S. at 483 (quoting Grinnell, 384 U.S. at 570-71) ("'scheme of willful . . . maintenance'" is illegal)); Eastman Kodak Co. v. Southern Photo Materials Co., 273 U.S. 359, 375 (1927). The Court's holdings are to the same effect. In Aspen, the Court upheld liability without saying anything about the degree of harm to the plaintiff except that it was substantial; it was enough that unjustified conduct contributed to the defendant's monopoly power. In Eastman Kodak, the Court held the Section 2 claim sufficient to go to trial without inquiry into the degree of harm suffered by the plaintiffs who threatened the defendant's monopoly power. Even in a case treated as one of mere attempted monopolization, Lorain Journal Co. v. United States, 342 U.S. 143 (1951), the Court readily found Section 2 to be violated by the defendant newspaper's deliberate actions to take advertising business from its principal, if not sole, rival (radio station), without any analysis of the particular degree of harm to the rival or to consumers in the market. Thus, the Court's articulated standards condemn a monopolist's action that lacks

[6]"'[N]o monopolist monopolizes unconscious of what he is doing,'" and "'[i]mproper exclusion (exclusion not the result of superior efficiency) is always deliberately intended.'" Aspen, 472 U.S. at 602, 603 (quoting United States v. Alcoa, 148 F.2d 416, 432 (2d Cir. 1945), and R. Bork, The Antitrust Paradox 160 (1978)).

legitimate business justification and "threatens to defeat or forestall the corrective forces of competition and thereby sustain or extend the defendant's agglomeration of power." Eastman Kodak, 504 U.S. at 488 (Scalia, J., dissenting) (emphasis added).

Third, an action that might not be held to violate Section 1 (though it is concerted action) may nevertheless be held to violate Section 2 because of its threat to competition. Cf. Eastman Kodak, 504 U.S. at 488 (Scalia, J., dissenting) ("Behavior that might otherwise not be of concern to the antitrust laws -- or that might even be viewed as procompetitive -- can take on exclusionary connotations when practiced by a monopolist."); United States v. Microsoft Corp., 1998 WL 614485 (D.D.C. 1998), at *23 ("a monopolist's conduct that does not rise to the level of a § 1 violation may nevertheless violate § 2"). The likelihood that a particular agreement with a harmful impact on rivals will contract consumer choice is greater with a firm that is already a monopolist. By definition, a monopolist has substantial ability to exploit consumers; a monopolist is thus more likely to undertake actions that serve no business purpose other than to protect its monopoly.

c. The Conduct At Issue In This Case. No matter what legally available formulation of a monopolization standard is invoked, and no matter what role is assigned to intent, already-suffered consumer harm, or independent illegality of the concerted aspects of Microsoft's conduct under Section 1, this Court's findings establish that Microsoft engaged in monopolizing acts in violation of Section 2. Microsoft clearly had a deliberate plan to use means beyond competition on the merits to prevent erosion of the applications barrier to entry that protects its operating system monopoly. Microsoft's several actions harmed consumers, harmed promising threats to its monopoly power, and were costly to Microsoft itself. No legitimate business justifications can account for these actions, leaving them inexplicable except on the basis of the willfully sought benefits of maintaining the operating-system monopoly.

This is not a case of a firm simply enjoying the fruits of economic forces that may produce a natural monopoly, with entry efforts failing on their own cost-and-quality merits. Nor is this a case where Congress or a State legislature has concluded that a particular market is better subjected to regulatory controls on entry than left to free-market competition. Rather, this is a

case in which a monopolist in an unregulated market intentionally set out to squash promising marketplace efforts to lower the critical barrier to entry and expansion in the monopolized market. Whatever Microsoft may think of the value of preserving its platform, its calculated effort to prevent competition is fundamentally anathema to the commitment to competition embodied in the Sherman Act. See National Soc'y of Prof. Eng'rs v. United States, 435 U.S. 679, 695 (1978); see FTC v. Procter & Gamble Co., 386 U.S. 568, 580 (1967); United States v. Philadelphia Nat'l Bk., 374 U.S. 321, 371 (1963); see also Otter Tail Power Co. v. United States, 410 U.S. 366, 380 (1973).

Microsoft's campaign included at least the following acts:

- proposing a collusive agreement from Netscape to withdraw from platform competition, then withholding crucial information about Windows 95 following Netscape's rejection of Microsoft's proposal to divide the browser market on June 21, 1995;
- tying Internet Explorer to Windows 95;
- tying Internet Explorer to Windows 98;
- imposing restrictions on OEMs' ability to modify the desktop screen or boot sequence of any personal computer on which Windows 95 or Windows 98 is to be installed;
- coercing OEMs to support Internet Explorer and reject third party software;
- conditioning IAP placement in the Windows Referral Server on preferential treatment of Internet Explorer;
- conditioning IAP placement in the Windows Online Services Folder on preferential treatment of Internet Explorer;
- insisting on exclusionary terms in agreements with ICPs;
- conditioning access to crucial information about its operating system products on ISV use of Internet Explorer and Microsoft's Internet Explorer-specific HTML Help technology;
- conditioning continued development of the vital Office productivity suite for the Apple Macintosh operating system on Apple's agreement to favor Internet Explorer;
- pricing Internet Explorer at zero when distributed separately from Windows, and providing Internet Explorer to IAPs, ISVs, and others at an effective royalty of less than zero, with no plan to recoup Microsoft's losses from doing so other than through maintenance of Microsoft's operating system monopoly;

- hampering the development and distribution of cross-platform Java technology by eliminating Netscape's ability to serve as a distribution vehicle, by conditioning ISVs' access to critical information about Microsoft's operating system products on their support of Microsoft's Windows-specific Java implementation, and by failing to warn ISVs of the Windows-specific impact of utilizing Microsoft's Windows-specific extensions to otherwise cross-platform Java standards;

- pressuring OEMs not to support or distribute Intel's NSP technology and coercing Intel to agree to stop promoting NSP; and

- conditioning support of Intel microprocessors on Intel's withdrawal of platform-level software efforts.

This Court's findings establish the anticompetitive nature of these acts and of the campaign as a whole. The findings compel the conclusion that Microsoft, a monopolist, unlawfully maintained its operating system monopoly in violation of Section 2 of the Sherman Act.

.After Seeking Netscape's Agreement Not To Threaten Its Monopoly, Microsoft Took Costly Actions That Impaired Consumer Choice, Lacked Legitimate Justification, And Served Simply To Maintain Microsoft's Monopoly By Stifling Netscape and Java

This Court's findings recount the multiple avenues by which Microsoft, from 1995 to 1998, sought to stem the threats that it recognized Netscape and Java posed to the critical barrier to entry protecting its operating-system monopoly. The threat from Netscape was dual. The browser itself held the potential to become a platform for the writing of applications that might then run on non-Windows as well as Windows operating systems. ¶¶ 69-72. The browser also was an important vehicle for the distribution of Sun's Java technologies. The threat from Java was similar; Java technologies themselves held the potential -- indeed, are pointedly designed -- to enable the development of cross-platform applications. ¶¶ 73-77. Taken alone, either the browser or the Java threat was substantial. Taken together, they reinforced one another and posed an even greater threat.

Of the many actions Microsoft took to stifle the Netscape threat, the first of the actions described below was an overt attempt to buy Netscape's collusion in backing off the effort to develop or promote development of an alternative platform. All the rest of the actions, undertaken when that effort at conspiracy failed, were forms of hostile attacks, designed to cripple Netscape's ability to acquire customers and, as one consequence, to impair the

distribution of Java. The Court has found that many of these actions cost Microsoft substantial money, directly and in foregone revenue, and that no legitimate business reason justifies any of these actions or the extent of their effects in restricting the threat to its monopoly. Each of these actions was unlawful under basic monopolization standards.

a. The Proposal And Pressure To Keep Netscape Out Of Platform Development. Using its control over Windows-related information needed by Netscape, Microsoft initially undertook "an effort to persuade Netscape to structure its business such that the company would not distribute platform-level browsing software." ¶ 79; see ¶¶ 79-89. "Had Netscape accepted Microsoft's proposal, it would have forfeited any prospect of presenting a comprehensive platform for the development of network-centric applications." ¶ 88. And, because Netscape was then "the only browser product with a significant share of the market and thus the only one with a potential to weaken the applications barrier," the proposal, if it had been accepted, would have given Microsoft "such control over the extensions and standards that network-centric applications (including Web sites) employ as to make it all but impossible for any future browser rival to lure appreciable developer interest away from Microsoft's platform." ¶ 89.

Microsoft's proposal, though not accepted by Netscape, is as unlawful a monopolizing act as was the (unaccepted) price-fixing proposal in United States v. American Airlines, Inc., 743 F.2d 1114, 1121 (5th Cir. 1984) (American's proposal that it and Braniff split traffic at Dallas airport violated Section 2 as attempt to monopolize, even though Braniff rejected the proposal). Microsoft already possessed monopoly power, and Netscape was viewed by Microsoft as an alarming threat because of its potential for facilitating competition in the operating-system market by performing one function already being performed by Windows, exposing APIs for the use of applications writers. Microsoft's proposal was an unadorned proposal that the two firms stop competing in that important respect, specifically for the purpose of deterring the developments of cross-platform applications and thus protecting the operating-system monopoly. Microsoft's proposal was nakedly anticompetitive.

Microsoft's proposal, moreover, was not just an offer. It was an explicit threat, backed by the ability and willingness of Microsoft to use its Windows monopoly power to pressure

Netscape to accept, and to punish Netscape for refusing. Microsoft in fact carried out its threat and withheld crucial Windows-related technical information from Netscape, causing delays in Netscape's release of its Windows 95 browser at a commercially significant time. ¶¶ 90-92. Microsoft's withholding of such information had no pro-competitive justification; to the contrary, given Netscape's prominence at the time, Microsoft's actions deprived Windows 95 of one of its most popular complements. Its purpose was instead to use Microsoft's power to protect its operating- system monopoly.

b. Exclusionary Actions Respecting Personal Computer Manufacturers. Having failed to secure Netscape's agreement to abandon the platform threat, Microsoft decided that it "needed to constrict Netscape's access to the distribution channels that led most efficiently to browser usage." ¶ 143. As Microsoft realized, "no other distribution channel for browsing software even approaches the efficiency" of "pre-installation by OEMs and bundling with the proprietary client software of IAPs:" Users need both a computer and an IAP (internet access provider) to browse, they rarely switch from "whatever browsing software is placed most readily at their disposal," and OEM and IAP provision are the easiest ones for most consumers. ¶¶ 145, 144, 146-147. "Knowing that OEMs and IAPs represented the most efficient distribution channels of browsing software, Microsoft sought to ensure that, to as great an extent as possible, OEMs and IAPs bundled and promoted Internet Explorer to the exclusion of Navigator." ¶ 148.

The OEM-related actions are described here, and the IAP actions below. The overall effect of the OEM-related action has been largely to "exil[e] Navigator from the crucial OEM distribution channel" (¶ 239), leaving Netscape on "only a tiny percentage of the PCs that OEMs were shipping" by January 1999 (¶ 239). To the extent that Navigator can still use the channel, "Microsoft has substantially increased the cost of that distribution." ¶ 240. The Court summarized (¶ 241):

> In sum, Microsoft successfully secured for Internet Explorer — and foreclosed to Navigator — one of the two distribution channels that leads most efficiently to the usage of browsing software. Even to the extent that Navigator retains some access to the OEM channel, Microsoft has relegated it to markedly less efficient forms of distribution than the form vouchsafed for Internet Explorer, namely, prominent placement on the Windows desktop. Microsoft achieved this feat by using a complementary set of tactics. First, it forced OEMs to take Internet Explorer with Windows and forbade them to remove

or obscure it — restrictions which both ensured the prominent presence of Internet Explorer on users' PC systems and increased the costs attendant to pre-installing and promoting Navigator. Second, Microsoft imposed additional technical restrictions to increase the cost of promoting Navigator even more. Third, Microsoft offered OEMs valuable consideration in exchange for commitments to promote Internet Explorer exclusively. Finally, Microsoft threatened to penalize individual OEMs that insisted on pre-installing and promoting Navigator. Although Microsoft's campaign to capture the OEM channel succeeded, it required a massive and multifarious investment by Microsoft; it also stifled innovation by OEMs that might have made Windows PC systems easier to use and more attractive to consumers. That Microsoft was willing to pay this price demonstrates that its decision-makers believed that maximizing Internet Explorer's usage share at Navigator's expense was worth almost any cost.

i. *Binding Internet Explorer to Windows*. The OEM channel was first constricted by Microsoft's binding of Internet Explorer to Windows. ¶¶ 149-201. See Eastman Kodak, 504 U.S. at 483 (tying may constitute a monopolizing act); Multistate Legal Studies, 63 F.3d at 1550 (same). Although many consumers wish to make separate choices as to Web browsers and operating systems (¶¶ 150-152), and other firms have found it efficient to supply the products separately (¶ 153), Microsoft set out to prevent that separation by a series of ever-more restrictive steps that initially denied end users the option of OEM-effected separation, then made it harder and harder for consumers themselves to avoid receiving and even using Internet Explorer when they acquired Windows. "Microsoft decided to bind Internet Explorer to Windows in order to prevent Navigator from weakening the applications barrier to entry, rather than for any pro-competitive purpose." ¶ 155 (emphasis added). Its several actions to that end made it substantially less likely that Navigator would also be installed because installing Navigator in addition to Internet Explorer would lead to confusion among some users, consume disk space and increase testing and support costs to OEMs, which operate at such low margins that three support calls can make a PC sale unprofitable. See ¶¶ 159, 210, 222.

Microsoft first denied consumers the benefits of OEM ability to offer them a choice of a Windows PC either with or without Internet Explorer. It required OEMs to install Internet Explorer 1.0 and 2.0 or its successor versions with Windows 95 and, in addition, prohibited them from running an "add/remove" or "uninstall" program (or taking any other steps) to delete the means by which Internet Explorer would be executed in the computer memory and triggered by end users. ¶ 158. Then, starting with Windows 95 OEM Service Release 2.0 and Internet

Explorer 3.0, Microsoft began to intermingle routines for browsing and non-browsing operating-system routines in the same files, the "primary motivation" being "to ensure that the deletion of any file containing browsing-specific routines would . . . cripple Windows 95." ¶ 164. Finally, Microsoft set out to intermingle browsing functions in operating-system files even further for Windows 98, whose release Microsoft even delayed -- thereby depriving consumers of beneficial features -- in order to complete the costly commingling, all "simply in order to protect the applications barrier to entry." ¶ 168.

One aspect of the additional Windows 98 commingling was to ensure that the add/remove or uninstall feature that allows end users to disable other supposedly integrated aspects of Windows 98 does not work for Internet Explorer, even though Microsoft's customer, Gateway, had requested that Microsoft provide a means to uninstall Internet Explorer in Windows 98. ¶170. A second was to ensure that Internet Explorer is actually triggered even in circumstances in which the user has chosen another browser as the default; Microsoft thus forced actual consumer use of Internet Explorer and caused considerable confusion to consumers believing they had chosen Navigator, still further deterring OEM installation of Navigator. ¶ 171. Consumers wanting the non-browser features of Windows 98 could not obtain them without the burdens of the unwanted, extra, commingled browser software -- burdens that include "performance degradation, increased risk of incompatibilities, and the introduction of bugs" (¶ 173), as well as vulnerability to security violations and viruses (¶ 174). And denying the ability to uninstall causes extra memory to be used because an uninstall program saves memory (if not hard disk space) by leaving unexecuted a substantial amount of code (if it is not commingled with code that must be executed for other purposes). ¶¶ 184-185.

The Court summarized some of the consumer harms (¶ 410):

> By refusing to offer those OEMs who requested it a version of Windows without Web browsing software, and by preventing OEMs from removing Internet Explorer . . . prior to shipment, Microsoft forced OEMs to ignore consumer demand for a browserless version of Windows. The same actions forced OEMs either to ignore consumer preferences for Navigator or to give them a Hobson's choice of both browser products at the cost of increased confusion, degraded system performance, and restricted memory. By ensuring that Internet Explorer would launch in certain circumstances in Windows 98 even if Navigator were set as the default, and even if the consumer had removed all conspicuous means of invoking Internet Explorer, Microsoft created confusion and frustration for

> consumers, and increased technical support costs for business customers. Those Windows purchasers who did not want browsing software — businesses, or parents and teachers, for example, concerned with the potential for irresponsible Web browsing on PC systems — not only had to undertake the effort necessary to remove the visible means of invoking Internet Explorer and then contend with the fact that Internet Explorer would nevertheless launch in certain cases; they also had to (assuming they needed new, non-browsing features not available in earlier versions of Windows) content themselves with a PC system that ran slower and provided less available memory than if the newest version of Windows came without browsing software.

There was "no justification" for Microsoft's several techniques of binding Internet Explorer to Windows 95 and Windows 98. ¶¶ 175-198. As for Windows 95, Microsoft bound Internet Explorer to Windows by means of contract, and there was "no technical or quality-related reason" for it to do so. ¶¶ 175-176. Internet Explorer 1.0 and 2.0 involved no intermingled files and "thus could be installed or removed without affecting the rest of Windows 95 functionality in any way." ¶ 175. Nor is there any such reason for Microsoft's refusal to license Windows 95 with Internet Explorer 3.0 or 4.0 uninstalled or to permit OEMs to uninstall them, as shown by the fact that Microsoft provided the add/remove, or uninstall, feature for use by end users. ¶ 176.

As for Windows 98, the Court's finding is unequivocal: "[T]here is no technical justification for Microsoft's refusal to meet consumer demand for a browserless version of Windows 98. Microsoft could easily supply a version of Windows 98 that does not provide the ability to browse the Web, and to which users could add the browser of their choice." ¶ 177. Thus, "[n]o consumer benefit can be ascribed . . . to Microsoft's refusal to offer a version of Windows 95 or Windows 98 without Internet Explorer, or to Microsoft's refusal to provide a method for uninstalling Internet Explorer from Windows 98." ¶ 186. Specifically, "Microsoft could offer consumers all the benefits of the current Windows 98 package by distributing the products separately and allowing OEMs or consumers themselves to combine the products if they wished." ¶ 191. See GAF v. Eastman Kodak Co., 519 F. Supp. 1203, 1227-28 (S.D.N.Y. 1981) (product design, if unreasonable, can be unlawful monopolizing act; citing cases).

The Windows 98 "integration" is, in the end, "as [Microsoft's] Allchin put it, simply a choice about 'distribution.'" ¶ 186. The refusal to provide for or permit OEMs to effect separation cannot be justified as protecting Windows APIs: Among other reasons, uninstalling Internet Explorer leaves the APIs available for platform use; OEMs have ample incentive to

include Windows APIs needed for applications demanded by consumers; and Microsoft itself fragments its platform by introducing new APIs into portions of its installed based and then enabling separate distribution of needed APIs by ISVs or, indeed, by itself. ¶ 193. Nor can it somehow be defended -- even as a factual matter, much less as a legal matter -- on the ground that Internet Explorer is so much the best browser, or is the only one capable of achieving scale economies, that competitive efforts at further innovation in browsers are not worthwhile. ¶¶ 194-198. To the contrary, the binding of Internet Explorer to Windows is harmful to innovation and to consumers more generally.

In short, Microsoft's binding of Internet Explorer to Windows reduced the value of Windows to Microsoft's customers. Without justification, it denied to those customers that wanted it the option of Windows without Internet Explorer and imposed on them the costs of the unwanted browsing software. It made no sense for Microsoft to reduce the value of its product and harm customers in that way except as a means of removing Navigator as a platform threat and thereby protecting the Windows monopoly.

ii. Limiting OEM Control Over The Desktop And The Boot Sequence. To make sure that Navigator was not made too easily accessible, "Microsoft threatened to terminate the Windows license of any OEM that removed Microsoft's chosen icons and program entries from the Windows desktop or the 'Start' menu. It threatened similar punishment for OEMs who added programs that promoted third-party software to the Windows 'boot' sequence." ¶ 203. It did so even though OEMs were seeking to create product-differentiating, consumer-assisting boot sequence introductory screens and complained vigorously that the restrictions made their PCs "more difficult and more confusing to use, and thus less acceptable to consumers," and also increased product returns and support costs. ¶¶ 209, 214. These restrictions were imposed through the license agreements. ¶¶ 205, 213. Microsoft's reasons for these restrictions and their anticompetitive effects are settled in this Court's findings. "These inhibitions soured Microsoft's relations with OEMs and stymied innovation that might have made Windows PC systems more satisfying to users. Microsoft would not have paid this price had it not been convinced that its

actions were necessary to ostracize Navigator from the vital OEM distribution channel." ¶ 203; see ¶¶ 202-229.

No valid and sufficient reason supports any of the related forms of Microsoft's restrictions on desktop or boot sequence alterations, which specifically targeted non-Microsoft products, including Navigator (¶ 220), and "succeeded in raising the costs to OEMs of pre-installing and promoting Navigator" (¶ 216). The forbidden modifications "would not compromise the quality or consistency of Windows any more than the modifications that Microsoft currently permits," and, in any event, "Microsoft's response has been more restrictive than necessary." ¶ 221. Microsoft already allows many OEM modifications; and, more significantly, the highly competitive nature of the OEM market (and slim profit margins, which can be erased by three support calls) make OEMs acutely sensitive either to removing any features valued or even expected by customers or to providing lower quality desktops than Windows. ¶¶ 222, 225. Microsoft also now allows major modifications of the boot sequence; "[w]ith all the variety that Microsoft now tolerates in the boot sequence, including the promotion of OEM-branded browser shells, it is difficult to comprehend how allowing OEMs to promote Navigator in their tutorials and Internet sign-up programs would further compromise Microsoft's purported interest in consistency." ¶ 223. The forbidden modifications, moreover, would not have "removed or altered any Windows APIs." ¶ 226. And other sellers of operating systems, namely IBM and Apple, which presumably have similar interests in consumer satisfaction and product integrity, have not sought similarly restrictive conditions. ¶ 229.

In brief, "Microsoft would not have imposed prohibitions that burdened OEMs and consumers with substantial costs, lowered the value of Windows, and harmed the company's relations with major OEMs had it not felt that the measures were necessary to maximize Internet Explorer's share of browser usage at Navigator's expense." ¶ 221. These actions did not expand or improve consumer choices. They made no business sense for Microsoft except as a means of removing Navigator as a platform threat and thereby protecting the Windows monopoly.

iii. Pressure, Expenditures And Agreements To Favor Internet Explorer and Interfere with Distribution of Navigator. Finally, "Microsoft used incentives and threats in

an effort to secure the cooperation of individual OEMs." ¶ 230. It gave valuable consideration to certain OEMs in exchange for certain commitments to aid Internet Explorer by, for example, making it the default browser. ¶ 231. It successfully threatened Compaq, exploiting Compaq's dependency on cooperation from Microsoft as a supplier of its monopoly Windows products, to agree to a strong commitment to Internet Explorer and to "curtail its distribution and promotion of Navigator." ¶¶ 232-234. Concomitantly, it penalized IBM and Gateway in various ways when they declined such an alliance. ¶¶ 235-238. These actions -- which were costly, reduced the value of Microsoft's products to its OEM customers, and impaired consumer choice -- were not in Microsoft's business interest except as a means of eliminating Navigator as a platform threat and thereby protecting the Windows monopoly.

c. <u>Exclusionary Actions Respecting Internet Access And On-Line Service Providers</u>. In addition to choking off the OEM channel, Microsoft took actions and entered into agreements to "exclud[e] Navigator from the IAP Channel," which is "the other of the two most efficient channels for distributing browsing software." ¶ 242; <u>see</u> ¶ 242-310. Microsoft entered into agreements with a substantial share of IAPs that committed them to strict limits on their distribution or promotion of Navigator (¶¶ 244-245) and gave incentives for IAPs to convert Navigator users to Internet Explorer (¶ 246). This Court has summarized (¶¶ 247, 308):

> Microsoft made substantial sacrifices, including the forfeiture of significant revenue opportunities, in order to induce IAPs to do four things: to distribute access software that came with Internet Explorer; to promote Internet Explorer; to upgrade existing subscribers to Internet Explorer; and to restrict their distribution and promotion of non-Microsoft browsing software. The restrictions on the freedom of IAPs to distribute and promote Navigator were far broader than they needed to be in order to achieve any economic efficiency. This is especially true given the fact that Microsoft never expected Internet Explorer to generate any revenue. Ultimately, the inducements that Microsoft offered IAPs at substantial cost to itself, together with the restrictive conditions it imposed on IAPs, did the four things they were designed to accomplish: They caused Internet Explorer's usage share to surge; they caused Navigator's usage share to plummet; they raised Netscape's own costs; and they sealed off a major portion of the IAP channel from the prospect of recapture by Navigator. As an ancillary effect, Microsoft's campaign to seize the IAP channel significantly hampered the ability of consumers to make their choice of Web browser products based on the features of those products.
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> As Microsoft hoped and anticipated, the inducements it gave out <u>gratis</u>, as well as the restrictive conditions it tied to those inducements, had, and continue to have, a substantial exclusionary impact. First, many more copies of Internet Explorer have been

distributed, and many more IAPs have standardized on Internet Explorer, than would have been the case if Microsoft had not invested great sums, and sacrificed potential sources of revenue, with the sole purpose of protecting the applications barrier to entry. Second, the restrictive terms in the agreements have prevented IAPs from meeting consumer demand for copies of non-Microsoft browsing software pre-configured for those services. The IAPs subject to the most severe restrictions comprise fourteen of the top fifteen access providers in North America and account for a large majority of all Internet access subscriptions in this part of the world.

i. *Referral Server*. For example, in addition to agreements with IAPs (representing 95% of subscribers) to make Internet Explorer the "preferred" browser (¶ 251), Microsoft exchanged valuable placement on the Windows 95 Referral Service for various commitments from most of the top IAPs. The IAPs would use Internet Explorer as a standard or default and also severely restrict their affiliation with Netscape: They would include no Netscape links or promotions on their home pages; they would supply Navigator to a subscriber only if requested; and they would have no more than (typically) 25% Navigator users regardless of whether the users came from the Referral Server. ¶ 258. Microsoft also paid, in cash or reduced fees, for IAPs to agree to convert Navigator users to Internet Explorer or to use particular Microsoft APIs. ¶¶ 259-260. These commitments cost Microsoft substantial revenue. Indeed, "Microsoft bartered away so much of the referral fees" that the costs of the Referral Server exceeded receipts. ¶ 261.

These restrictions on promoting rival browsing software cannot be explained as a promotion of Web access. Nor were the agreements "typical cross-marketing arrangements" because they restricted the IAPs' dealing with Navigator wholly outside the Referral Server channel. ¶ 262. They were costly to Microsoft and cannot be explained other than as means to eliminate Navigator as a platform threat, thus protecting the Windows monopoly. Some of the restrictions have since been lifted; but, "[i]n the year-and-a-half that they were in full force," they "induced the major IAPs to customize their client software for Internet Explorer, gear their promotional and marketing activities to Microsoft's technologies, and convert substantial portions of their installed bases." ¶ 271.

ii. *Online Services Folder*. In 1996, Microsoft entered into an agreement with AOL that, in its exclusionary provisions and effects, went well beyond satisfying AOL's desire

for a "standard" browser on which to build its proprietary access software. Specifically, Microsoft "exchanged favorable placement on the Windows desktop, as well as other valuable considerations, for AOL's commitment to distribute and promote Internet Explorer to the near exclusion of Navigator." ¶ 272. The result has been "an enormous surge in Internet Explorer's usage share and a concomitant decline in Navigator's share." ¶ 272. Because AOL is the largest on-line service provider, this agreement has been so important that Microsoft has never lifted the restrictions committing AOL to the "near exclusion of Navigator." ¶ 272.

Microsoft ceded desktop space to AOL on all Windows machines despite the strong misgivings of Bill Gates, and despite the expected undermining of Microsoft's own on-line service, MSN, because of the overriding priority of securing increased browser usage through AOL. ¶¶ 285-286. In return, AOL agreed to base its proprietary access software for its flagship service on Internet Explorer; exclusively promote Internet Explorer; keep non-Microsoft browser access to no more than 15%; and not provide accessible instructions about how to reach a site to download Navigator. ¶ 289. The recognized effect was "the virtual exclusion of Navigator" (¶ 290). Though AOL "would have preferred to make an AOL-configured version of Navigator readily available," it "contravened its natural inclination to respond to consumer demand in order to obtain the free technology, close technical support, and desktop placement offered by Microsoft." ¶¶ 293, 294. This tradeoff has continued to be controlling for AOL, even after it acquired Netscape. ¶ 301.

The intent and effects of the restrictions in the Microsoft-AOL agreement are clear. They "had no purpose other than maximizing Internet Explorer's usage share at Navigator's expense." ¶ 291. Considering the breadth of the restrictions and no-revenue character of Internet Explorer, "the restrictions accomplished no efficiency. They affected consumers only by encumbering their ability to choose between competing browsing technologies." ¶ 291. Microsoft, to secure this objective, was willing to "undermine[] its own MSN, in which Microsoft had invested hundreds of millions of dollars." ¶ 291. In brief, the efforts Microsoft made to secure these agreements made no business sense except as a means of eliminating Netscape as a platform threat and thus protecting the Windows monopoly.

As a result of these efforts, Microsoft was able to capture for at least four years "one of the single most important channels for the distribution of browsing software" and make clear to developers "that non-Microsoft software would not attain stature as the standard platform for network-centric applications." ¶ 304. "The AOL coup, which Microsoft accomplished only at tremendous expense to itself and considerable deprivation of consumers' freedom of choice, thus contributed to extinguishing the threat that Navigator posed to the applications barrier to entry." ¶ 304. That effect was reinforced by the signing of similar exclusionary agreements with AT&T WorldNet, Prodigy, and CompuServe. ¶¶ 305-306.

d. Exclusionary Acts Respecting Internet Content Providers. Microsoft, though recognizing that Internet Content Providers (ICPs) "were not nearly as important a distribution channel for browsing software as OEMs and IAPs," nevertheless pursued its "high priority" of "protecting the applications barrier to entry" through restrictive agreements in this channel as well. ¶ 311. Microsoft created an area on the desktop, the Channel Bar, which was originally thought to be valuable by ICPs (¶ 316), and "exchanged placement in that area at no charge for the commitment of important ICPs to promote and distribute Internet Explorer exclusively and to create their content with technologies that would make it appear optimally when viewed with Internet Explorer." ¶ 313. Microsoft also required ICPs to ensure that their content appeared degraded when viewed with Navigator and prohibited ICPs from paying Netscape for promotion. ¶ 329.

The finding of Microsoft's lack of legitimate justification is unequivocal: "As was the case with the IAPs, neither the sacrifice that Microsoft made to enlist the aid of the top ICPs nor the restrictions it placed on them can be explained except as components of a campaign to protect the applications barrier to entry against Navigator." ¶ 313. Here, too, Microsoft's conduct made no business sense for Microsoft except as a means of removing Netscape as a platform threat and thus protecting the Windows monopoly.

The terms of the ICP agreements varied somewhat, but their anticompetitive intent and effect did not. Intuit, because of its desire for placement on the Channel Bar, reluctantly agreed to refrain from meeting consumers' demand for Navigator and "to refuse to pay Netscape to

promote Intuit products on Netscape's Web sites." ¶ 326. Microsoft bartered its valuable desktop space "not to increase demand for a revenue-generating product, but rather to suppress the distribution and diminish the attractiveness of technology that Microsoft as a potential threat to its monopoly power." ¶ 329. And, in barring ICP payments to Netscape for promotion but allowing the promotion itself, Microsoft made clear that its "motivation was not simply a desire to generate brand associations" but rather to deprive Netscape of revenue. ¶ 329. Moreover, the requirement that ICPs actually "ensure that their content appeared degraded when viewed with Navigator rather than Internet Explorer" demonstrates that "Microsoft's desire to lower demand for Navigator was . . . independent of, and far more malevolent than, a simple desire to increase demand for Internet Explorer." ¶ 329.

The Court summarized (¶ 330):

> The terms of Microsoft's agreements with ICPs cannot be explained in customary economic parlance absent Microsoft's obsession with obliterating the threat that Navigator posed to the applications barrier to entry. Absent that obsession, Microsoft would not have given ICPs at no charge licenses to distribute Internet Explorer. What is more, Microsoft would not have incurred the cost of componentizing Internet Explorer and then licensed that version to Intuit at no charge. By sacrificing opportunities to cover its costs and even make a profit, Microsoft advanced its strategic goal of maximizing Internet Explorer's usage share at Navigator's expense. Whereas Microsoft might have developed the Channel Bar without ulterior motive as a matter of product improvement, it would not have exchanged placement on the Channel Bar for terms as highly and broadly restrictive as the ones it actually extracted from ICPs.

The Channel Bar turned out not to be attractive to consumers and, as a result, the restrictions did not have "a large impact on the relative usage shares of Internet Explorer and Navigator." ¶ 330. Still, the restrictions "prevented the distribution and installation of a significant quantity, but certainly less than ten million, copies of Navigator" and "probably deprived Netscape of revenue measure in millions of dollars, but nowhere near $100 million." ¶¶ 334, 335.

e. Exclusionary Actions Respecting Independent Software Vendors And Apple. Microsoft repeated its pattern in at least two additional instances in which it incurred costs and compromised customer good will in order to exclude Netscape and thereby gain browser share. These actions, too, make no business sense except as means of crippling Navigator as a platform threat and thereby protecting the Windows monopoly.

In its "First Wave" agreements, Microsoft promised to give ISVs preferential access to needed information about Windows in exchange for the ISVs' promise to use Internet Explorer, as their default browser for any software they developed with a hypertext-based user interface, and to use Microsoft's HTML Help, which is accessible only with Internet Explorer. ¶ 340. Microsoft thus "has ensured that many of the most popular Web-centric applications will rely on browsing technologies found only in Windows and has increased the likelihood that the millions of consumers using these products will use Internet Explorer rather than Navigator." ¶ 340. This is "another area in which [Microsoft] has applied its monopoly power to the task of protecting the applications barrier to entry." ¶ 340.

Microsoft did essentially the same thing in coercing Apple to switch the default browser for the Mac OS from Navigator to Internet Explorer. ¶¶ 341-356. To prevent Navigator from acquiring enough Mac OS users that developers would write to Navigator's APIs, Microsoft "set out to recruit Mac OS users to Internet Explorer, and to minimize Navigator's usage share among Mac OS users." ¶ 341. Microsoft simply used the powerful leverage it had over Apple in the form of the keenly awaited Mac Office 97, which Microsoft threatened to cancel even though its development was essentially complete. ¶¶ 343-350. Apple eventually agreed to make Internet Explorer the default selection with the Mac OS, to place no other browser icons on the desktop, to avoid promoting non-Microsoft browsers, and to favor Internet Explorer in certain other ways. ¶ 352. In return, Microsoft committed to continued Mac Office development. ¶ 353.

This Court summarized the character of Microsoft's actions in securing this agreement (¶ 355):

> Apple increased its distribution and promotion of Internet Explorer not because of a conviction that the quality of Microsoft's product was superior to Navigator's, or that consumer demand for it was greater, but rather because of the in terrorem effect of the prospect of the loss of Mac Office. To be blunt, Microsoft threatened to refuse to sell a profitable product to Apple, a product in whose development Microsoft had invested substantial resources, and which was virtually ready for shipment. Not only would this ploy have wasted sunk costs and sacrificed substantial profit, it also would have damaged Microsoft's goodwill among Apple's customers, whom Microsoft had led to expect a new version of Mac Office. The predominant reason Microsoft was prepared to make this sacrifice, and the sole reason that it required Apple to make Internet Explorer its default browser and restricted Apple's freedom to feature and promote non-Microsoft browsing

> software, was to protect the applications barrier to entry. More specifically, the requirements and restrictions relating to browsing software were intended to raise Internet Explorer's usage share, to lower Navigator's share, and more broadly to demonstrate to important observers (including consumer, developers, industry participants, and investors) that Navigator's success had crested. Had Microsoft's only interest in developing the Mac OS version of Internet Explorer been to enable organizational customers using multiple PC operating-system products to standardize on one user interface for Web browsing, Microsoft would not have extracted from Apple the commitment to make Internet Explorer the default browser or imposed restrictions on its use and promotion of Navigator.

By these means, Microsoft succeeded in "ensur[ing] that most users of the Mac OS will use Internet Explorer and not Navigator." ¶ 356. Because Navigator "needed high usage share among Mac OS users if it was ever to" spark cross-platform software development, Microsoft's actions have "severely sabotaged Navigator's potential to weaken the applications barrier to entry." ¶ 356. It is hard to imagine a more starkly anticompetitive act than Microsoft's use of a threat to cripple an important customer, while sacrificing sale of a product it had already developed at considerable expense, solely to impede others' efforts to expand consumer choice in Microsoft's monopolized market. Like the other conduct at issue, this was anticompetitive maintenance of its monopoly. See, e.g., Reazin, 899 F.2d at 973.

f. Spending And Foregoing Revenue To Build Explorer Usage Share To Protect The Applications Barrier. Microsoft went beyond the erection of unjustified roadblocks to Netscape's ability to compete with Internet Explorer on the merits of their products. Microsoft also priced Internet Explorer at zero for consumers (when distributed separately from Windows) and incurred large expenditures that would have been senseless but for the prospect of protecting the applications barrier to entry. See ¶ 142 ("Even if Microsoft maximized its ancillary revenue [which it plainly did not], the amount of revenue realized would not come close to recouping the cost of its campaign to maximize Internet Explorer's usage share at Navigator's expense."); ¶ 247 ("Microsoft never expected Internet Explorer to generate any revenue"). Microsoft's expenditures and its foregoing of revenues, which cut across many of the actions Microsoft took to impede Netscape's merits-based competition with Internet Explorer, were predatory. See, e.g., Aspen, supra (costly actions making no sense except for prospect of monopoly creation or protection); Great Western, supra (same); Advanced Health-Care Servs., supra (same); Berkey Photo, supra (same).

As to the zero price on consumer licenses for Internet Explorer, this Court found that, although Microsoft might have bundled Internet Explorer with Windows at no additional charge (¶ 136), Microsoft's determination to preserve the applications barrier "was the main force driving its decision to price the product at zero" when sold separately. (¶ 136; see also ¶ 141).[7] That decision was very costly because Microsoft was spending more than $100 million a year developing and promoting Internet Explorer, yet expected no ancillary revenue. ¶ 140. At a time when Netscape was charging consumers for Navigator, Microsoft bypassed "the opportunity to make a substantial amount of revenue from the sale of Internet Explorer . . . in furtherance of the larger strategic goal of accelerating Internet Explorer's acquisition of browser usage share" to reinforce the applications barrier to entry. ¶ 137.

In any event, even if the zero price is not itself predatory, the findings are decisive that, especially in light of that price, Microsoft's large-scale spending -- in outlays and foregone revenues, in dealing with Internet Access Providers (IAPs), Independent Software Vendors (ISVs), Apple, and OEMs -- made no business sense except as a means of removing Netscape as a platform threat and thereby protecting the Windows monopoly. "Microsoft would not have given Internet Explorer away to IAPs, ISVs, and Apple, nor would it have taken on the high cost of enlisting firms in its campaign to maximize Internet Explorer's usage share and limit Navigator's, had it not been focused on protecting the applications barrier." ¶ 136. Microsoft "paid huge sums of money, and sacrificed many millions more in lost revenue every year, in order to induce firms to take actions that would help increase Internet Explorer's share of browser usage at Navigator's expense" (an expected zero-revenue product). ¶ 139. In particular, to secure promotion of Internet Explorer and inhibit promotion of Netscape, Microsoft gave away licenses and technical support and technology, valuable "desktop 'real estate,'" and

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[7]The Court elsewhere stated that Microsoft "might still have set the price for an Internet Explorer consumer license at zero." ¶ 140. The context furnished by the next paragraph suggests that the Court was referring to the no-extra-charge bundling described in ¶ 136. See ¶ 141 ("had Microsoft not viewed browser usage share as the key to preserving the applications barrier to entry, the company would not have taken its efforts [like pricing the standalone product at zero] beyond developing a competitive browser product, including it with Windows at no additional cost to consumers, and promoting it with advertising").

revenue for listing IAPs in Microsoft's Internet Referral Server and Online Services Folder. ¶ 139. It also gave away cash and revenues and a variety of other costly incentives to induce OEMs to aid Internet Explorer. ¶¶ 139, 230-34. "Microsoft would not have absorbed" these considerable costs except as a means "of preserving the applications barrier to entry." ¶ 141.

In language invoking traditional standards for predatory conduct, this Court has found: "This investment was only profitable to the extent that it protected the applications barrier to entry." ¶ 141. "Neither the desire to bolster demand for Windows, nor the prospect of ancillary revenues, explains the lengths to which Microsoft has gone." ¶ 141. In particular, because Navigator makes a computer just as Internet-ready as Internet Explorer, and because Microsoft undertook "costly efforts" to induce favoring of Internet Explorer even by Apple (whose sales reduce sales of Windows), bolstering consumer demand for Windows cannot explain Microsoft's expenditures. ¶ 141.

Non-monopoly ancillary revenues also cannot explain Microsoft's expenditures. Microsoft, far from seeking such revenues, has consistently foregone ancillary revenues from advertising fees collected by browser shells and or a user's start page. ¶ 142. The Court has found, moreover, that "[e]ven if Microsoft maximized its ancillary revenue, the amount of revenue realized would not come close to recouping the cost of its campaign to maximize Internet Explorer's usage share at Navigator's expense." ¶ 142. In short, the campaign was classically predatory: It "had little to do with attracting ancillary revenues and everything to do with protecting the applications barrier from the threat posed by Netscape's Navigator and Sun's implementation of Java." ¶ 142.

The predatory character of Microsoft's spending and pricing decisions, as a tool for maintaining the operating-system monopoly, does not depend on the chain of events underlying usual "predatory pricing" claims -- any more than did the predatory character of the conduct in <u>Aspen</u> or <u>Great Western</u>, for example. When a defendant is accused of using "predatory pricing" of a product to acquire or maintain monopoly power or otherwise work anticompetitive harm in the market <u>for that product</u>, courts have concluded that the claim depends on (a) the driving out of the "prey" selling that product and (b) the presence of substantial entry barriers in that market,

so that (c) the defendant can thereafter raise the price of that product sufficiently high and for sufficiently long that it can, from that product, recoup the losses incurred during the predatorily low pricing. See Brooke Group, 509 U.S. at 222-28; Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 230-36 (1st Cir. 1983) (Breyer, J.). Microsoft's zero pricing and vast spending for distribution of Internet Explorer, by contrast, did not require for its anticompetitive effect an ability to raise the price of Internet Explorer in the future. It achieved an anticompetitive effect simply by perpetuating Microsoft's monopoly in the market for another product, the Windows operating-system.

Microsoft Took Other Anticompetitive Actions To Interfere With The Distribution And Development Of Cross-Platform Java

This Court's findings describe Microsoft's pervasive pattern of conduct to forestall proliferation of Netscape in order to protect its operating-system monopoly. E.g., ¶¶ 142, 148, 155, 160, 168, 176, 194, 203, 291, 308, 384. Microsoft's "obsession" with that objective (¶ 330), however, was not limited to Netscape and the dual threat it posed to the applications barrier — exposing its own APIs and serving as a key means of distribution of Sun's Java and the Java APIs. Microsoft also attacked cross-platform Java directly, through an additional series of anticompetitive acts, to stifle its distribution and development.

Cross-platform Java is a form of middleware that threatened to lower the applications barrier to entry by exposing APIs -- in Java class libraries used by Java Virtual Machine (JVM) software -- that would permit applications to be written either on a Windows PC or on another kind of computer with minimal effort at rewriting or "porting." ¶¶ 73-77. Microsoft recognized that threat, and the growing number of Java-based applications developers, and thus "became interested in maximizing the difficulty with which applications written in Java could be ported from Windows to other platforms, and vice versa" (¶ 386).

Microsoft developed a JVM and various Java developer tools that called on Windows-specific code. Microsoft's methods had certain advantages: They were "slightly easier for developers to use" and "tended to run faster" than platform-independent versions on a Windows PC. ¶ 389. But when a developer used Microsoft's methods, the resulting "Java application

would be much more difficult to port" to different operating systems. ¶ 389. "Far from being an unintended consequence of an attempt to help Java developers more easily develop high-performing applications, incompatibility was the intended result of Microsoft's efforts." ¶ 390.

Microsoft did not simply leave it to consumers to choose the Java implementation they preferred. Instead, Microsoft took numerous anticompetitive steps to intefere with the development and distribution of cross-platform Java, steps that "resulted in fewer applications being able to run on Windows than otherwise" (¶ 407) and thus made no business sense except as a means of protecting the applications barrier to entry.

a. Failing To Warn And Confusing Developers About The Creation Of Microsoft-Specific Extensions To Java. First, Microsoft designed its developer tools so that Java applications writers would, by default and without warning, use certain "keywords" and "compiler directives" that would render the resulting application properly executable only on Microsoft's version of Java, thus "'quietly . . . building win32-only java apps.'" ¶ 394. The intended effect of Microsoft's actions was to confuse developers, steering demand for platform-independent applications to Windows-specific ones.

. Pressuring And Coercing Third Parties Not To Support Cross-Platform Java Implementations. Microsoft also pressured third parties not to use Sun's standards in order to "thwart the very creation of cross-platform Java interfaces." ¶ 404. When Intel "developed a JVM designed to run well on Intel-based systems while complying with Sun's cross-platform standards," Microsoft pressured Intel not to work with Sun and not to allow Netscape to distribute Intel's Sun-compliant JVM, invoking Intel's need for cooperation from Microsoft. ¶ 396. Microsoft threatened to withhold crucial information from Intel "to induce Intel to stop aiding Sun in the development of Java classes that would support innovative multimedia functionality." ¶ 404. And, in order to get "Intel to stop helping Sun create Java Multimedia APIs, especially ones that run well (ie native implementations) on Windows'" (¶ 406), Microsoft offered to include in Windows "any multimedia interfaces that Intel agreed to not help Sun incorporate into the Java class libraries." ¶ 406. In fact, Intel did stop its aid to Sun. ¶ 406.

Microsoft pursued the same ends with ISVs, whom it induced "to distribute Microsoft's version instead of a Sun-compliant one." ¶ 400. Microsoft conditioned ISVs' access to early Windows 98 and Windows NT information on making their Java applications compatible with Microsoft's JVM, which meant using developer tools that created incompatibilities with Sun's Java standards. ¶ 401. Denying ISVs access to information about Windows had no business "purpose other than to maximize the difficulty of porting Java applications between Windows and other platforms." ¶ 401. Those agreements were supplemented by at least one agreement providing for exclusive use of Microsoft's version of Java. ¶ 402.

In addition, in exchange for agreeing to distribute RealNetworks' media player, Microsoft extracted a commitment from RealNetworks to use its "best efforts to ensure that its player primarily use Windows-specific technology, rather than any analogous interfaces that Sun or Netscape might develop." ¶ 403. There was "no technical reason why RealNetworks could not have designed its media player to support both Microsoft's technologies and ones developed by Sun or Netscape." ¶ 403. And, partly as a result of Microsoft's anticompetitive action against Navigator, Netscape eventually decided that it could no longer afford the engineering costs of "bundling up-to-date JVMs with Navigator" and so ceased distribution of "JVMs compliant with Sun's standards." ¶ 397.[8]

These anticompetitive actions significantly impeded the ability of Java to develop into a truly robust form of middleware. However far Java might have gotten in weakening the applications barrier without Microsoft's interference, "Microsoft has succeeded in greatly impeding Java's progress to that end with a series of actions whose sole purpose and effect were to do precisely that." ¶ 407.

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[8]The conclusion that the purpose of these actions was to harm cross-platform Java is confirmed by this Court's findings that, in at least two instances where Microsoft could easily have done otherwise and thereby promoted consumer choice, Microsoft refused to cooperate with cross-platform Java tools. See ¶¶ 389-390 (JVM); ¶¶ 391-393 (RMI). And Microsoft's refusal to cooperate with cross-platform Java made such Java all the more vulnerable to the anticompetitive actions described in the text.

. **Microsoft's Browser And Java Actions Were Parts Of A Multi-Front Campaign To Impede Cross-Platform Middleware By Means Of Threats That Restricted Consumer Choice**

Microsoft's anticompetitive campaign against Netscape and Java was part of a multi-front attack on middleware that threatened to promote the development of cross-platform applications and thereby lower the applications barrier to entry in Microsoft's monopolozed operating-system market.

a. Microsoft Took Anticompetitive Actions To Interfere With Intel's Plans For Platform-level Software. Microsoft undertook two closely related efforts with respect to Intel's plans to develop and distribute platform-level software. When Intel sought to "present[] developers with a set of operating-system-independent interfaces" (¶ 94), Microsoft employed threats, directed at Intel and OEMs, that exploited Intel's dependence on Microsoft's monopoly power in Windows. Through those threats, Microsoft succeeded in securing Intel's acquiescence in squelching the development of such interfaces.

When Intel developed its own Native Signal Processing (NSP) software that "bore the potential to weaken the barrier protecting Microsoft's monopoly power" (¶ 97), Microsoft not only successfully pressured Intel directly, but also successfully "pressured the major OEMs to not install NSP software on their PCS until the software ceased to expose APIs." ¶¶ 94-101. Although Microsoft had "transient and remediable" justifications for objecting to Intel's NSP software designed for Windows 3.1, the but-for cause of the "level of pressure that it brought to bear" was its "abiding fear . . . that the NSP software would render ISVs, device manufacturers, and (ultimately) consumers less dependent on Windows," and Microsoft would not have subjected Intel to the level of pressure it did without this fear. ¶ 99. In response to Microsoft's threats, and realizing it could not distribute its software without the cooperation of the OEMs, Intel by July 1995 "surrender[ed] the pace of software innovation to Microsoft" and "agreed to stop promoting its NSP software." ¶¶ 101, 103.

Microsoft's only genuine concerns about NSP for Windows 3.1 were "transient and remediable" and did not explain the full level of pressure that Microsoft brought to bear. ¶ 99. To the contrary, Microsoft's pressure on Intel to drop NSP had no "pro-competitive

justifications" (¶ 410) and deprived consumers of potentially valuable innovation and inhibited innovation by others. ¶¶ 101, 410, 412. In short, Microsoft's actions, which did not simply allow Intel to address any justified "transient and remediable" concerns but instead forced Intel to abandon NSP altogether, harmed consumers and "impaired competition in an unnecessarily restrictive way." See Aspen, 472 U.S. at 605.

In addition to killing NSP, Microsoft acted to preempt other Intel initiatives that might reduce the applications barrier to entry that protects the Windows monopoly. In August 1995, Microsoft threatened that Intel "could not count on Microsoft to support Intel's next generation of microprocessors as long as Intel was developing platform-level software that competed with Windows." ¶ 102. Microsoft was well aware of the devastating effect that carrying out this threat, and letting OEMs know that Microsoft "did not support Intel's chips," would have for Intel's core microprocessor business. ¶ 102. This threat, like the NSP threat, met with success. "Intel agreed to stop developing platform-level interfaces that might draw support away from interfaces exposed by Windows." ¶¶ 102, 103.

This coerced agreement injured consumers both by depriving them of potentially valuable innovation by Intel and by inhibiting innovation by others. ¶¶ 410, 412. It was a naked effort to protect the Windows monopoly that had no procompetitive justification.

. Microsoft Took Anticompetitive Actions To Interfere With The Development Or

distribution Of Cross-platform Middleware By Other Firms. Microsoft made a similar, albeit unsuccessful, attempt with respect to Apple, particularly Apple's cross-platform middleware called QuickTime (¶ 104); Microsoft's motivation was its desire to limit as much as possible the development of multimedia content that would run cross-platform. ¶ 110. See ¶¶ 104-110. Likewise, Microsoft tried to stop the exposing of competing APIs in RealNetworks' streaming video software (which could develop into part of a middleware layer, ¶ 111), confirming that "decision-makers at Microsoft were willing to invest a large amount of cash and other resources into securing the agreement of other companies to halt software development that exhibited

discernible potential to weaken the applications barrier" (¶ 114). See ¶¶ 111-114. Microsoft also exploited IBM's dependency on Windows (particularly, the financial terms and timeliness of access to licenses, information, and support) in an effort to limit IBM's marketing of Lotus Notes as a middleware threat (e.g., ¶¶ 78, 120, 129, 132), as well as IBM's sale of OS/2 Warp and SmartSuite, which competed directly with Windows 95 and Office (¶¶ 115-132).

* * *

These actions confirm both Microsoft's ability and Microsoft's readiness to use monopoly power to blunt threats by means that reduce rather than expand consumer choice on the merits. They show that "it is Microsoft's corporate practice to pressure other firms to halt software development that either shows the potential to weaken the applications barrier to entry or competes directly with Microsoft's most cherished software products" (¶ 93) and to do so even at the expense of interfering with the development of software that would benefit users and thereby enhance the value of Windows. This pattern of middleware-attacking actions made no business sense except as a means of protecting the applications barrier to entry and, thus, the Windows monopoly.

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Microsoft's Conduct Was Anticompetitive Considered As A Whole

This Court's findings establish the lack of legitimate business justification for and anticompetitive nature of each of Microsoft's actions. Each of those actions is itself sufficient, under the principles set forth above, for the Court to conclude that Microsoft violated Section 2 of the Sherman Act. It is also clear, however, that that legal conclusion is reinforced by properly considering these interrelated findings together.

It is well settled in the Section 2 context that "factual components of a case should be viewed together." Intergraph Corp. v. Intel Corp., 1999 WL 1000717, at *21 (Fed. Cir. 1999) (internal quotation marks omitted); see Continental Ore Co. v. Union Carbide & Carbon Corp., 370 U.S. 690 (1962).[9] Coordinated actions like those at issue here bolster each other in

[9]In Intergraph, supra, the Federal Circuit recognized the Continental Ore principle endorsing consideration of related factual components supporting a single legal theory, such as unlawful

demonstrating the reasons behind them and in bringing about their probable effects on competition. See United States v. Western Elec. Co., 524 F. Supp. 1336, 1344 (D.D.C. 1981); Litton Systems, Inc. v. AT&T, 700 F.2d 785, 816 (2d Cir. 1983), cert. denied, 464 U.S. 1073 (1984). The adverse competitive effects of individual actions cannot be fully appreciated outside the context of the other restraints on competition. If, for example, a defendant took separate actions to foreclose access to each of the four outlets in a market, each action by itself might leave available to competitors sufficient distribution alternatives, yet each action would not be blessed simply for that reason, in disregard of the foreclosing effects of the defendant's several actions as whole. Thus, as the Supreme Court held in rejecting a trial court's separated consideration of each of several acts (which led the trial court to deem none "sufficiently exclusionary to violate the antitrust laws"), the evidence must be viewed "without tightly compartmentalizing the various factual components and wiping the slate clean after scrutiny of each." Continental Ore, 370 U.S. at 699; see City of Anaheim v. Southern California Co., 955 F.2d 1373, 1376 (9th Cir. 1992) ("synergistic effect" of multiple actions); City of Mishawaka v. American Elec. Power Co. Inc., 616 F.2d 976, 986 (7th Cir. 1980).

Here, the various actions by Microsoft were related, and each exacerbated the effects of the others. Some of Microsoft's actions, viewed in isolation, may have had only a modest impact on competition. But the impact of any of them was in fact much greater in context because they were undertaken against the background of Microsoft's full range of platform-protecting actions. The more Microsoft was able to maintain the applications barrier through blunting other middleware threats, for example, the greater the importance of the browser or Java as a tool for lowering the barrier, and hence the more starkly harmful the effect of Microsoft's efforts to beat back the browser and Java threats.

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maintenance of monopoly. What an antitrust plaintiff may not do, the Court concluded, is to present alternative legal theories attacking the defendant's challenged action, each of which is deficient (in Intergraph because there was no competitive relation with the defendant at all), and then seek to do better by somehow adding up "the degrees of support for each legal theory." 1999 WL 1000717, at *21.

This Court's findings, in addition to detailing the harms to consumer choice effected by each of Microsoft's actions, make clear the overall anticompetitive impact of Microsoft's conduct -- whether considering the browser and Java and other middleware conduct together or, alternatively, considering the browser or Java conduct against the background of Microsoft's other conduct. Thus, Microsoft's efforts effectively excluded Navigator from access to the channels that lead most efficiently to actual browser usage. ¶ 357. They sharply reduced Navigator's share of overall usage to about 50% by mid-1998 (¶ 360) and (even more significantly) Navigator's share of new usage to less than 40% by early 1998 (¶ 362), with "[a]ll signs point[ing] to" further declines in the nearly two years since then (¶ 372) and "the most reasonable prediction" being a 40% overall usage share by Netscape (with Internet Explorer at 60%) by 2001 (¶ 373). See ¶ 378 ("Internet Explorer's installed base is now larger and growing faster."). So dramatic a decline in Navigator's usage would not have occurred based simply on the improvement in Internet Explorer's quality (which was no better than at "parity" with Netscape) or its offering with Windows at no extra charge, without the additional actions of Microsoft to exclude Netscape from the various critical channels leading to browser usage. ¶¶ 375-376. The result has been the success of Microsoft's plan: "[T]he APIs that Navigator exposes will not attract enough developer attention to spawn a body of cross-platform, network-centric applications large enough to dismantle the applications barrier to entry." ¶ 378.

The actions of Microsoft "inflicted considerable harm on Netscape's business": They "relegated Netscape to more costly and less effective methods of distributing and promoting its browsing software." ¶ 379. The additional costs, coupled with being forced to offer Navigator free, "deterred Netscape from undertaking technical innovations that it might otherwise have implemented in Navigator." ¶ 379. Although AOL has now acquired Netscape, "Navigator's transformation into a platform attractive enough to threaten the applications barrier would be a chimerical aspiration;" at a minimum, "Microsoft has succeeded in forestalling for several years Navigator's evolution in that direction." ¶ 383. More generally: "Microsoft has succeeded in forestalling the development of enough full-featured, cross-platform, network-centric applications to render the applications barrier penetrable." ¶ 385.

The various actions of Microsoft injured competition and lacked procompetitive justification; that is enough to condemn them. Those actions individually worked direct harms to consumers (¶ 410), as already detailed. Collectively, they have "also harmed consumers indirectly" by "hobbl[ing] a form of innovation that had shown the potential to depress the applications barrier to entry sufficiently to enable other firms to compete effectively against Microsoft" in its monopoly operating-system market. ¶ 411. Navigator was such a form of innovation, as was Sun's Java implementation -- which itself was "retarded" by the hobbling of Netscape, a critical distribution vehicle for cross-platform Java (¶ 411). Intel's Native Signal Processing was another such form of innovation. The upshot is that "Microsoft has retarded, and perhaps altogether extinguished, the process by which these two middleware technologies [Navigator and Java] could have facilitated the introduction of competition into an important market." ¶ 411. And, in so doing, Microsoft has "sent the clear message to developers that no platform for network-centric applications can compete for ubiquity with the 32-bit Windows API set" (¶ 374) and, more generally and insidiously, has conveyed the message that it will "harm any firm that insists on pursuing initiatives that could intensify competition against one of Microsoft's core products," thus deterring "investment in technologies and businesses that exhibit the potential to threaten Microsoft." ¶ 412.

II. MICROSOFT VIOLATED SECTION 1 OF THE SHERMAN ACT BY UNLAWFULLY TYING A WEB BROWSER TO ITS OPERATING SYSTEM

Section 1 of the Sherman Act prohibits certain "tying arrangements" -- agreements between a defendant and its customers requiring the customers, as a condition of obtaining one product (tying product), also to take a second product (tied product), or at least not to purchase a rival's version of the tied product. See Eastman Kodak, 504 U.S. at 461; Northern Pac. Ry. Co. v. United States, 356 U.S. 1, 5-6 (1958). The Supreme Court has long condemned tying arrangements through which a defendant exploits "its control over the tying product to force the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms." Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 12 (1984); see id. at 9-10, 16 & nn. 13, 14 & 15 (citing earlier decisions).

Accordingly, the Court has established a per se rule that prohibits tying arrangements where (a) there are two separate products, (b) the defendant has market power in the tying product, (c) the arrangement in fact requires the customers to take the tied product in order to obtain the tying product, and (d) the arrangement affects a "substantial volume of interstate commerce" in the tied product. Eastman Kodak, 504 U.S. at 461-62; see Foster v. Maryland State Sav's. & Loan Ass'n, 590 F.2d 928, 931 (D.C. Cir. 1978); Multistate Legal Studies, 63 F.3d at 1546.

The requirements for application of the per se rule are met in this case by Microsoft's several means of forcing licensees -- whether personal computer manufacturers or end users -- to take (and often actually to use) a browser along with the operating system: the requirement that OEMs include the browser along with Windows; the refusal to allow use of an add/remove or uninstall option by OEMs; the subsequent refusal to provide for such an option even for consumers; and the intermingling of files and routines to be shared by Web browsing and operating system functions. That is enough for liability. In addition, it is clear that, even under a rule of reason analysis, there is no business justification for Microsoft's tying practices and that those practices have threatened anticompetitive effects in the browser market and maintained Microsoft's monopoly in the operating-system market.

Indeed, the anticompetitive harm from tying is especially great where, as here, a monopolist is using tying, like the other practices discussed above, in order to protect its monopoly. Because of its monopoly power, Microsoft has the ability to bind with its operating system other products like Internet Explorer, even if doing so reduces the value of Windows to its customers, who have no viable alternative. Microsoft has an incentive to do so because, by increasing the costs OEMs and users must incur to distribute or use Navigator, tying can help remove Netscape as a platform threat and thereby protect the Windows monopoly.

. Operating Systems And Browsers Are Separate Products

1. The Supreme Court has repeatedly articulated and applied a consumer-demand standard for the two product requirement of the per se rule. Most recently, in Eastman Kodak, the Court ruled that the requirement is met when there is "sufficient consumer demand so that it is efficient for a firm to provide" the two products "separately." Eastman Kodak, 504 U.S.

at 462. The test reflects the competitive concern at which the tying prohibition is aimed. The efficiency standard, in effect, asks whether a hypothetical supplier in a competitive market would provide the products separately. It thus appropriately identifies those circumstances in which a refusal by a supplier to provide the products separately might involve "a sacrifice [of] short-run benefits and consumer good will in exchange for a perceived long-run impact" on competition. Aspen, 472 U.S. at 610-11.

In Jefferson Parish, the Court explained that two items do not become a single product just because the defendant has combined them into a "functionally integrated package of services" (466 U.S. at 19 (footnote omitted)); "the question whether one or two products are involved turns not on the functional relation between them, but rather on the character of the demand for the two items." 466 U.S. at 19 (footnote 30 omitted, citing numerous tying cases involving "functionally linked products at least one of which is useless without the other"). Based on its precedents' focus on whether "products . . . were distinguishable in the eyes of buyers" (466 U.S. at 19 (footnote omitted)), the Court concluded that the inquiry was whether "there is a sufficient demand for the purchase of [the tied product] separate from [the tying product] to identify a distinct product market in which it is efficient to offer" the two products "separately." Id. at 21-22. Under this standard, the Jefferson Parish Court upheld the district court's finding of two products because the items could be offered separately, they were in practice billed separately, there was ample testimony that consumers often wished to arrange for them separately, and other firms allowed the option of separate acquisition of the items. Id. at 22-23 & n.39. See also Multistate Legal Studies, 63 F.3d at 1547; Service & Training, Inc. v. Data Gen. Corp., 963 F.2d 680, 684-85 (4th Cir. 1992); United States v. Microsoft Corp., 1998 WL 614485 (D.D.C. 1998), at *7.

In United States v. Microsoft Corp., 147 F.3d 935 (D.C. Cir. 1998), the D.C. Circuit, in construing a consent decree, stated a "tentative" new standard for when two products might be deemed "integrated." Id. at 953. While making clear that it was not deciding any antitrust law issue (id. at 950 n.14), the Court stated its view that this new standard, though different from that of Eastman Kodak and Jefferson Parish, was nevertheless "consistent with tying law,"

suggesting that it might apply to the two-product inquiry in certain "product design" or "technological innovation" tying cases. Id. at 948, 950, 953. This standard applies only when two items are technologically commingled, rather than merely joined for marketing or distribution as a contractual or packaging matter. Id. And even when there is a "'physical or technological interlinkage'" (id. at 949, quoting X P. Areeda, E. Elhauge, & H. Hovenkamp, Antitrust Law ¶ 1746b, at 228 (1996)), a finding of "integration" -- or one product -- would be rejected if the defendant has engaged in "[c]ommingling for an anticompetitive purpose (or for no purpose at all)," that is, "has done nothing more than to metaphorically 'bolt' two products togther." Id. & n.12; see id. at 950 (condemning intertwined design where done "'for the purpose of tying the products, rather than to achieve some technologically beneficial result,'" quoting Response of Carolina, Inc. v. Leasco Response, Inc., 537 F.2d 1307, 1330 (5th Cir. 1976)). The novel commingling of two items would be treated as one product only if the "integrated design offers benefits when compared to a purchaser's combination of corresponding stand-alone functionalities." Id. at 949.

If it were necessary to decide the issue, the Court should decide that the Supreme Court's focus on efficient provision of separate items meeting consumer demand, rather than the D.C. Circuit's consent-decree standard, establishes the two-product standard for Sherman Act tying law for product-design tying, as well as for contractual or distributional tying. See United States v. Microsoft Corp., 1998 WL 614485, at *8-*10. The Supreme Court has not carved out an exception for some category of "product design" or "technological" tying cases. There is no material difference in the potential for competitive harm or the defendant's incentive to seek to achieve such harm — in the tied-product market or in the tying-product market.[10] The only difference may be a greater concern about judicial capacity to evaluate "technological" ties; but at least for software, there is a countervailingly greater opportunity to mask nakedly anticompetitive tying as supposed efficiency, and in any event there is no reason to

[10] See Grappone, Inc. v. Subaru of New England, Inc., 858 F.2d 792, 795 (1st Cir. 1988) (describing use of tying to reinforce power in tying-product market); Carlton & Waldman, "The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries" (Sept. 1998), www.nber.org/papers/w6831.

underestimate judicial capacity.[11] Indeed, this case exemplifies the courts' ability to see through specious technological claims. There is no sufficient reason to jettison the familiar Jefferson Parish/Eastman Kodak standard.

Here, however, it is not necessary to join issue on the question of what standard ultimately governs. Under either standard, Microsoft has engaged in unlawful tying. All of Microsoft's several forms of bundling a browser with Windows involve two products under both standards.

2. This Court found that "the preferences of consumers and the responsive behavior of software firms demonstrate that Web browsers and operating systems are separate products." ¶ 154. There is a "consensus in the software industry" that the two provide distinct functionalities. ¶ 150. "Many consumers desire to separate their choice" of the two functionalities. ¶ 151. Some, such as corporate customers, wish to standardize on a single browser across multiple operating systems, for reasons of productivity, training and support costs, and security. ¶ 151. Still others, such as businesses not wanting their employees to have Web access and wanting to minimize support costs, "do not want a browser at all." ¶ 152. Further, "[b]ecause of the separate demand for browsers and operating systems, firms have found it efficient to supply the products separately," either by offering a browserless operating system or by allowing OEMs (as well as resellers and end users) not to install it or to uninstall it. ¶ 153. Of course, browsers are sold separately even by Microsoft. ¶ 153. These findings are sufficient to find two products under Eastman Kodak and Jefferson Parish.

Similarly, this Court's findings establish that there are two products even under the D.C. Circuit's suggested approach. That approach would have no applicability at all to Microsoft's earlier tying arrangements for Internet Explorer 1.0 and 2.0 because those arrangements involve no technological intermingling at all. Nor would the approach apply to Windows 95 OEM

[11] Courts are in fact frequently called on to decide technical issues in cases involving torts, economics, regulatory regimes, and other matters. See, e.g., Kumho Tire Co., Ltd. v. Carmichael, 119 S. Ct. 1167 (1999) (tire design in tort case); Zauderer v. Office of Disciplinary Counsel, 471 U.S. 626, 645 (1985) (deceptive advertising claim "may require resolution of exceedingly complex and technical factual issues"); Southern Pacific, supra (telecommunications regulation).

Service Release 2.0 to the extent that the tying arrangement is the contractual restriction barring OEMs from using the add/remove function available to end users.

Moreover, even the binding of Internet Explorer to Windows 98 (or any file-sharing aspects of the Windows 95 OEM Service Release 2.0), when now evaluated on a full record, flunk the D.C. Circuit's suggested standard for one product. United States v. Microsoft Corp., 1998 WL 614485, at *11-*12. As explained above, this Court has found that "there is no technical justification for Microsoft's refusal to meet consumer demand for a browserless version of Windows 98" (¶ 177), either by permitting the removal of such functionality (¶¶ 178, 181-86) or by designing Windows 98 without Internet Explorer built in (¶ 177). "No consumer benefit can be ascribed . . . to Microsoft's refusal to offer a version of Windows 95 or Windows 98 without Internet Explorer, or to Microsoft's refusal to provide a method for uninstalling Internet Explorer from Windows 98." ¶ 186. The design of Windows 98 was adopted only for an anticompetitive purpose, i.e., was nothing but "bolting." See ¶¶ 155-174. It provides no significant benefits compared to the easily achievable separation of functionality that could then be combined after separate acquisition by personal computer manufacturers or end users. ¶¶ 177, 186, 191. Thus, even under the D.C. Circuit's standards, two products are present.

. The Other Requirements For Per Se Condemnation Are Met

The three additional requirements for per se condemnation are clearly met in this case. The requirement of an effect on a substantial amount of commerce in the tied product is not an onerous one. See Fortner Enters., Inc. v. United States Steel Corp., 394 U.S. 495, 501 (1969) ($190,000); United States v. Loew's Inc., 371 U.S. 38, 49 (1962) ($60,800); Digidyne Corp. v. Data General Corp., 734 F.2d 1336, 1341 (9th Cir. 1984); United States v. Microsoft Corp., 1998 WL 614485, at *13. The costs incurred by PC manufacturers and by consumers who would prefer Navigator, and the significant adverse effect on Netscape's browser business (in which it has "significant economic interests," ¶ 201), readily establish that a substantial amount of commerce in browsers has been affected by Microsoft's several means of forcing personal computer manufacturers and users to take a browser along with their operating system.

Similarly, the market power requirement is met because Microsoft has market power in the tying product market. The requirement of "appreciable economic power in the tying market," or "market power," is met if the defendant has "the power 'to force a purchaser to do something that he would not do in a competitive market.'" Eastman Kodak, 504 U.S. at 464 (quoting Jefferson Parish, 466 U.S. at 14). A defendant has such power if it has "'the ability . . . to raise price and restrict output.'" Eastman Kodak, 504 U.S. at 464 (quoting Fortner, 394 U.S. at 503). Such power, "ordinarily . . . inferred from the seller's possession of a predominant share of the market" (Eastman Kodak, 504 U.S. at 464), is simply a lesser degree of monopoly power. Id. at 481. The findings of this Court demonstrating monopoly power, already described, a fortiori establish market power.

Finally, the requirement that Microsoft conditioned its customers' purchase of Windows on their taking of a browser is readily met, notwithstanding that a separate dollar payment was not exacted for the browser. Microsoft forced OEMs, as customers, to install the browser along with Windows and, if already installed, not to remove it. Microsoft forced the taking even of the icon and similar means of access. It forced the end user to take the resulting OEM-delivered browser. Even with the early Internet Explorer versions, it forced the end user to incur the costs of removing the browser by means of the uninstall or add/remove program. More recently, in Windows 98, Microsoft denied consumers even that option, leaving the user stuck with a browser that cannot readily be prevented from loading and running.

The vice here is not that Microsoft offered OEMs and users a bundled version of Windows and Internet Explorer. It is that Microsoft did not give them the option of taking Windows without the browser. It thus compelled those OEMs and users that wished otherwise to take Internet Explorer in order to get Windows.

Microsoft's forced bundling is far from a simple give-away that is costless to the customer. Unlike the free extra bar-review session at issue in Multistate Legal Studies, 63 F.3d at 1548, which any customer could simply disregard without incurring any burden, Microsoft's actions have imposed unavoidable costs on its manufacturer and end-user customers. Those costs have directly impaired "the freedom to select the best bargain in the second [browser] market"

(Jefferson Parish, 466 U.S. at 15); they have "coerce[d] the abdication of [customers'] independent judgment" about whether to acquire Internet Explorer or Navigator (or another brower). Times-Picayune Publ'g Co. v. United Sates, 345 U.S. 594, 605 (1953); and they have directly helped Microsoft maintain its monopoly power in the operating-system market. These results are just what tying law prohibits. See Grappone, supra; United States v. Microsoft Corp., 1998 WL 614485, at *12; IIIA P. Areeda & H. Hovenkamp, Antitrust Law ¶ 760b6 (1996).

C. A Rule Of Reason Analysis Condemns Microsoft's Tying Arrangements

The tying arrangements should be condemned under the rule of reason even if they were not condemned under the per se rule. The tying issue, as noted, is not Microsoft's offering to its customers the option of an operating system bundled with a browser at no extra charge, which this Court has found did confer (at least short-run) consumer benefits (¶ 408). Rather, the issue is the reasonableness of Microsoft's forcing of the bundle. That action cannot survive under normal rule of reason standards.

While competition in browsers -- and the innovation that comes with it -- was "not eliminated, . . . it was clearly curtailed." United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 220 (1940). Consumers were harmed in numerous ways, already detailed. Microsoft had no legitimate business justification for the binding of Internet Explorer to Windows. Indeed, Microsoft's tying arrangements, including its design of Windows 98, cost it substantial sums, imposed extra costs on OEMs and consumers, harmed consumers by delaying the release of Windows 98, and otherwise denied many consumers benefits that they desired and that there was no sound economic reason to deny them. "If the practice excludes competitors or restricts output without decreasing the cost of production, the practice generally will increase the price of consumption and thus have anticompetitive effects." Ass'n for Intercollegiate Athletics for Women, 735 F.2d at 583 n.7. Microsoft's tying arrangements produce such effects and are accordingly unreasonable.

III. MICROSOFT VIOLATED SECTION 1 OF THE SHERMAN ACT BY ENTERING INTO NUMEROUS UNLAWFUL EXCLUSIONARY AGREEMENTS

Section 1 of the Sherman Act prohibits any agreement that constitutes an "unreasonable restraint on competition." State Oil Co. v. Khan, 118 S. Ct. 275, 279 (1997); Continental T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36, 49 (1977); Chicago Board of Trade, 246 U.S. at 238-39; Standard Oil Co. v. United States, 221 U.S. 1, 60 (1911). Certain agreements, like price-fixing or market-division agreements, are condemned as unreasonable per se. See State Oil, 118 S. Ct at 279; Palmer v. BRG of Georgia, Inc., 498 U.S. 46 (1990); United States v. Topco Associates, Inc., 405 U.S. 596 (1972); United States v. Socony-Vacuum Oil Co., 310 U.S. 150 (1940). Any agreement is unlawful (under the rule of reason) if its restrictive effect on competition is not reasonably necessary to achieving a legitimate procompetitive objective, i.e., an interest in serving consumers through lowering costs, improving products, etc. National Society of Prof. Eng'rs, 435 U.S. at 691; Tampa Electric Co., 365 U.S. at 327-28; Kreuzer v. American Acad. of Periodontology, 735 F.2d 1479, 1492 (D.C. Cir. 1984); Smith v. Pro-Football, Inc., 593 F.2d 1173, 1183 (D.C. Cir. 1978); American Ad Mgmt., Inc. v. GTE Corp., 92 F.3d 781, 791 (9th Cir. 1996); Sullivan v. NFL, 34 F.3d 1091, 1103 (1st Cir. 1994), cert. denied, 513 U.S. 1190 (1995). See also United States v. Microsoft Corp., 1998 WL 614485, at *14 (agreements "unlawful only if they injure competition restricting competitors' output more than they further Microsoft's legitimate objectives or if Microsoft's objectives could be achieved by a less restrictive means" (citations omitted)).

The most full-fledged rule of reason analysis requires that "the factfinder weigh[] all of the circumstances of a case." GTE Sylvania, 433 U.S. at 49. The extent of the required analysis, however, depends on the type and circumstances of the restraint at issue. See California Dental Ass'n v. FTC, 119 S. Ct. 1604, 1618 (1999). For example, where "the great likelihood of anticompetitive effects [from the restraint at issue] can easily be ascertained," an elaborate examination of market circumstances is not required. See California Dental Ass'n, 119 S. Ct. at 1612-13; FTC v. Indiana Fed'n of Dentists, 476 U.S. 447, 459 (1986); NCAA, 468 U.S. at 110; National Soc'y of Prof. Eng'rs, 435 U.S. at 692. Regardless, both "[p]er se and rule-of-reason analysis are but two methods of determining whether a restraint is 'unreasonable,' i.e., whether its anticompetitive effects outweigh its procompetitive effects" (Atlantic Richfield Co. v. USA

Petroleum Co., 495 U.S. 328, 342 & n.12 (1990)) and, therefore, "whether the challenged agreement is one that promotes competition or one that suppresses competition" (National Soc'y of Prof. Eng'rs, 435 U.S. at 691). See California Dental Ass'n, 119 S. Ct. at 1614, 1615 (Section 1 condemns agreements with "net anticompetitive effect"; agreement would be "anticompetitive, not procompetitive" unless "any costs to competition associated with the elimination of across-the-board advertising will be outweighed by gains to consumer information (and hence competition)" from restrictive rule).

A rule of reason analysis, including a rule of reason analysis of exclusive-dealing or similar contracts that block or impair certain of rivals' opportunities to reach customers, examines "probable" or "likely" anticompetitive effects. Tampa Elec., 365 U.S. at 327; Nash v. United States, 229 U.S. 373, 378 (1913) ("It is the contract to restraint trade, not success, that violates § 1."); Barry Wright Corp., 724 F.2d at 237; see Omega Environmental, Inc. v. Gilbarco, Inc., 127 F.3d 1157, 1162 (9th Cir. 1997), cert. denied, 119 S. Ct. 46 (1998). For an exclusive-dealing or similar contract in particular, the examination looks for the contract's "tendency to 'foreclose' existing competitors or new entrants" (Omega, 127 F.3d at 1162), and the focus is on the contract's impact on the range of firms that may "readily" or "easily" compete (IIA P. Areeda, Antitrust Law ¶ 570b1, at 278 (1995), quoted in Omega, 127 F.3d at 1162). Diminished competition and consumer harm can result not only from the elimination of rivals but also from the imposition of added costs, for distribution or otherwise, that impair rivals' ability to lower price or innovate to improve their product. See Socony-Vacuum, 310 U.S. at 220 (Section 1 violated when competition, though not eliminated, is "curtailed"); U.S. Healthcare, 986 F.2d at 595 ("exclusive dealing arrangement may 'foreclose' so much of available supply or outlet capacity that existing competitors or new entrants may be limited or excluded and, under certain circumstances, this may reinforce market power and raise prices for consumers") (emphasis added); Interface Group v. Massachusetts Port Auth., 816 F.2d 9, 11 (1st Cir. 1987) ("Exclusive dealing arrangements may sometimes be found unreasonable under the antitrust laws because they may place enough outlets, or sources of supply, in the hands of a single firm (or small group

of firms) to make it difficult for new, potentially competing firms to penetrate the market.") (emphasis added); United States v. Microsoft Corp., 1998 WL 614485, at *19.

Specific percentages of market foreclosure are sometimes useful guides to likely economic effects, and this Court previously pointed to a 40% foreclosure for establishing an anticompetitive effect. United States v. Microsoft Corp., 1998 WL 614485, at *19-*20. The ultimate question, however, is whether the agreements at issue -- in the aggregate, see Continental Ore, 370 U.S. at 699; United States v. Microsoft Corp., 1998 WL 614485, at *20 -- produce a likelihood of anticompetitive effects, through the constricting of opportunities of rivals who as a result must spend more to try to compete, without justification by any pro-competitive objective of the agreements. This question must be answered by reference to the particular circumstances of the particular market. See Brooke Group, 509 U.S. at 229 (economic question of likely anticompetitive effects informed by "theory" but ultimately governed by "the realities of the market and the record facts"); Eastman Kodak, 504 U.S. at 466.

Here, the various non-tying agreements entered into by Microsoft (with Internet access providers, on-line service providers, Internet content providers, and others), detailed in the Section 2 analysis above, are unreasonable restraints of trade in both the market for Intel-based personal computer operating systems (¶¶ 18-32) and the market for browsers (¶¶ 199-201). As already described, this Court's findings establish that the collective impact of these agreements was to choke off meaningful access for Navigator to the two channels of distribution through which not just 40% but a "very large majority" of users obtain browsers (¶ 144); that the agreements had anticompetitive effects not outweighed or otherwise justified by procompetitive benefits; that the actual result has been a substantial lessening of competition from Navigator in the browser market, with Microsoft by 1998 already accounting for 60% of new browser usage; and that, because Navigator represented a critical threat to Microsoft's operating-system monopoly, the agreements' exclusionary effect on Navigator -- adding to and reinforcing the effect of Microsoft's actions to stifle other middleware enabling development of cross-platform applications -- simultaneously and intentionally had a forbidden anticompetitive effect

(maintaining Microsoft's monopoly) in the operating-system market. These findings require condemnation of all the agreements at issue as unreasonable restraints of trade.

IV. MICROSOFT ATTEMPTED TO MONOPOLIZE THE BROWSER MARKET

Section 2 of the Sherman Act prohibits attempts to monopolize. A defendant violates the prohibition if, in a relevant market, "(1) . . . 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." Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 456 (1993); see United States v. Microsoft Corp., 1998 WL 614485, at *23. The idea of this attempt offense, like other attempt offenses, has always been that the more predatory the acts involved, the sooner the law intervenes to condemn them, as long as the acts, if not stopped, carry the potential to produce the evils of the completed offense, namely, acquisition of power over price or innovation in the market. See IIIA P. Areeda & H. Hovenkamp, Antitrust Law ¶ 764d, at 84 (1996). This Court's findings establish each element of the offense of attempted monopolization of the browser market.

This Court defined the product, i.e., a browser, as the software needed for computer users "to select, retrieve, and perceive resources on the Web." ¶ 150. It found that a browser, as industry consensus reflects, is a product separate from the operating system. ¶ 154. And it specifically found a browser market. ¶¶ 199-201. That finding reflects the common-sense reality of the available competitive alternatives for consumers. See ¶ 195 (both Microsoft and product reviewers evaluate the merits of browser products compared to other browsers, not to a wider array of applications or other products). And the entry barriers noted below in summarizing Microsoft's threatened monopoly power in this market reinforce this market definition. See note 2, supra (entry considerations bear on market definition and market power).

The Court's findings also establish the two closely related requirements of predatory acts and specific intent. Specific intent is the intent to bring about the forbidden objective of monopoly. See Swift & Co. v. United States, 196 U.S. 375, 396 (1905) (intent "to produce a result which the law seeks to prevent -- for instance, the monopoly"); Spectrum Sports, 506 U.S. at 455 (quoting Swift). That objective does not require outright destruction of all rivals and the

acquisition of a 100% market share, but only enough to acquire the power to set price or limit innovation that constitutes monopoly power. See, e.g., DIAL A CAR, INC., v. Transportation, Inc. and Barwood, Inc., 82 F.3d 484, 486 (D.C. Cir. 1996) ("a specific intent to destroy or control competition") (emphasis added); Conoco Inc. v. Inman Oil Co., 774 F.2d 895, 905 (8th Cir. 1985) ("intent to control prices or unreasonably restrict competition").

The principal focus is on the character of the conduct (and its danger of producing monopoly power). In the normal case, the required intent is "inferred from objective evidence such as predatory conduct." United States v. Microsoft Corp., 1998 WL 614485, at *24; see Spectrum Sports, 506 U.S. at 459 (predatory acts "may be sufficient to prove the necessary intent to monopolize"); see also Association for Intercollegiate Athletics for Women, 735 F.2d at 585 n.11 ("one who intends to monopolize through unlawful means, as opposed to legitimate competition, possesses the requisite specific intent").[12]

This Court's findings establish that Microsoft deliberately "set out to maximize Internet Explorer's share of browser usage at Navigator's expense." ¶ 133; see ¶¶ 138, 140, 358 (same).[13] Moreover, as recounted in detail in Part I.B.2 above, the Court's findings as to Microsoft's acts explicitly establish both that Microsoft's acts toward Navigator (and any other non-Microsoft browser) had exclusionary effects and that those effects were specifically intended by Microsoft. Those findings meet the related intent and predatory conduct requirements for attempted monopolization of the browser market.

Microsoft may plan to keep the consumer price of Internet Explorer at zero and may have sought browser monopoly power for the purpose of protecting its Windows monopoly. Neither of those facts, however, alters either the predatory nature of Microsoft's acts or its specific intent to acquire monopoly power over browsers. Microsoft clearly sought the ability to control the

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[12]Reflecting the primary focus on conduct and its monopolizing tendency, the D.C. Circuit has referred to "the largely fictive character of 'specific intent to monopolize.'" Oetiker v. Werke, 556 F.2d 1, 7-8 (D.C. Cir. 1977).

[13]The Court found the evidence insufficient to find that Microsoft's present ambition is to ensure that most or all of the content on the Web would be accessible only through its browser. ¶ 384. As noted above, however, the specific intent element does not require so extravagant an aspiration; it is enough that the defendant sought monopoly power.

pace and type of innovation from competitors that might attract more users; that itself is enough for monopoly power. See duPont, 351 U.S. at 391 (market power is "power to control prices or exclude competition") (emphasis added).

Finally, this Court's findings establish the dangerous probability that, unimpeded, Microsoft's browser war would achieve the monopoly that Section 2 condemns. This Court has already noted that dangerous probability is chiefly a matter of market share and that "courts generally require plaintiffs to show that a defendant has a certain minimum market share." United States v. Microsoft Corp., 1998 WL 614485, at *25, * 26. The Fourth Circuit summarized the standards reflected in the case law in M&M Med. Supplies & Serv. v. Pleasant Valley Hosp., 981 F.2d 160, 168 (4th Cir. 1992) (en banc): Less than a 30% share presumptively is insufficient; a share of 30-50% usually is insufficient "except when conduct is very likely to achieve monopoly or when conduct is invidious"; and more than a 50% share is sufficient. And "[a] rising market share may show more probability of success than a falling share." IIIA P. Areeda & H. Hovenkamp, Antitrust Law ¶ 807e2, at 359 (1996). Moreover, in judging dangerous probability, "the conduct's potential at the time it occurs, rather than its actual effect, determines its legality," although, as an evidentiary matter, "later effects sometimes indicate the nature of that potential." IIIA P. Areeda & H. Hovenkamp, Antitrust Law ¶ 807f, at 360 (1996); see McGahee v. Northern Propane Gas Co., 858 F.2d 1487, 1505 (11th Cir. 1988); General Industries Corp., 810 F.2d at 807 (same); Multiflex, Inc. v. Samuel Moore & Co., 709 F.2d 980, 991-92 (5th Cir. 1983).

By 1998, Internet Explorer had already achieved 60% of new browser usage; its share of the installed base had already reached 50%; and all signs indicate that it is increasing and that Internet Explorer will have more than a 60% share of overall usage by 2001. ¶¶ 372-373. The snapshot figures and the unmistakable trajectory are themselves enough to establish the proximity to monopoly power that the attempt offense of Section 2 requires. Other findings reinforce that conclusion. Microsoft has already actually brought about one of the evils of monopoly power: It has "deterred Netscape from undertaking technical innovations that it may otherwise have implemented in Navigator." ¶ 379; see also ¶¶ 411, 412. Moreover, consumer

reluctance to switch browsers (¶ 144), Microsoft's "[n]etwork of exclusive contracts [and] distribution arrangements designed to lock out potential competitors" (United States v. Syufy Enterprises, 903 F.2d 659, 667 (9th Cir. 1990)), and its tying of Internet Explorer to Windows are barriers to new entry that might otherwise discipline the now dominant Internet Explorer. Microsoft's campaign against Navigator thus created the dangerous probability of monopoly power that is unlawful under Section 2.

CONCLUSION

The Court should conclude that Microsoft has violated Sections 1 and 2 of the Sherman Act and proceed to consider the appropriate remedy.

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Respectfully submitted,

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