

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

(Antitrust)

COMPLAINT

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Joel I. Klein
Assistant Attorney General

A. Douglas Melamed
Principal Deputy Assistant
Attorney General

Rebecca P. Dick
Director of Civil Non-Merger
Enforcement

Jeffrey Blattner
Special Counsel for Information
Technology

U.S. Department of Justice
Antitrust Division
950 Pennsylvania Avenue, N.W.
Washington, D.C. 20530-0001

Christopher S Crook
Chief

Phillip R. Malone
Steven C. Holtzman
Pauline T. Wan
Karma M. Giulianelli
Michael C. Wilson
Sandy L. Roth
John F. Cove, Jr.
Jeane Hamilton
Mark S. Popofsky
Attorneys

U.S. Department of Justice
Antitrust Division
450 Golden Gate Ave., Room.10-0101
San Francisco, CA 94102
(415) 436-6660

David Boies
Special Trial Counsel

I. NATURE OF THIS ACTION

1. This is an action under Sections 1 and 2 of the Sherman Act to restrain anticompetitive conduct by defendant Microsoft Corporation (“Microsoft”), the world’s largest supplier of computer software for personal computers (“PCs”), and to remedy the effects of its past unlawful conduct.

2. Microsoft possesses (and for several years has possessed) monopoly power in the market for personal computer operating systems. Microsoft’s “Windows” operating systems are used on over 80% of Intel-based PCs, the dominant type of PC in the United States. More than 90% of new Intel-based PCs are shipped with a version of Windows pre-installed. PC manufacturers (often referred to as Original Equipment Manufacturers, or “OEMs”) have no commercially reasonable alternative to Microsoft operating systems for the PCs that they distribute.

3. There are high barriers to entry in the market for PC operating systems. One of the most important barriers to entry is the barrier created by the number of software applications that must run on an operating system in order to make the operating system attractive to end users. Because end users want a large number of applications available, because most applications today are written to run on Windows, and because it would be prohibitively difficult, time-consuming, and expensive to create an alternative operating system that would run the programs that run on Windows, a potential new operating system entrant faces a high barrier to successful entry.

4. Accordingly, the most significant potential threat to Microsoft’s operating system monopoly is not from a direct, frontal assault by existing or new operating systems, but from

new software products that may support, or themselves become, alternative “platforms” to which applications can be written, and which can be used in conjunction with multiple operating systems, including but not limited to Windows.

5. To protect its valuable Windows monopoly against such potential competitive threats, and to extend its operating system monopoly into other software markets, Microsoft has engaged in a series of anticompetitive activities. Microsoft’s conduct includes agreements tying other Microsoft software products to Microsoft’s Windows operating system; exclusionary agreements precluding companies from distributing, promoting, buying, or using products of Microsoft’s software competitors or potential competitors; and exclusionary agreements restricting the right of companies to provide services or resources to Microsoft’s software competitors or potential competitors.

6. One important current source of potential competition for Microsoft’s Windows operating system monopoly comes from the Internet, described by Microsoft’s CEO, Bill Gates, in May 1995 as “the most important single development to come along since the IBM PC was introduced in 1981.” As Mr. Gates recognized, the development of competing Internet browsers -- specialized software programs that allow PC users to locate, access, display, and manipulate content and applications located on the Internet’s World Wide Web (“the web”) -- posed a serious potential threat to Microsoft’s Windows operating system monopoly. Mr. Gates warned his executives:

A new competitor “born” on the Internet is Netscape. Their browser is dominant, with a 70% usage share, allowing them to determine which network extensions will catch on. They are pursuing a multi-platform strategy where they move the key API

[applications programming interface] into the client to commoditize the underlying operating system.

7. Internet browsers pose a competitive threat to Microsoft's operating system monopoly in two basic ways. First, as discussed above, one of the most important barriers to the entry and expansion of potential competitors to Microsoft in supplying PC operating systems is the large number of software applications that will run on the Windows operating system (and not on other operating systems). If application programs could be written to run on multiple operating systems, competition in the market for operating systems could be revitalized. The combination of browser technology and a new programming language known as "Java" hold out this promise. Java is designed in part to permit applications written in it to be run on different operating systems. As such, it threatens to reduce or eliminate one of the key barriers to entry protecting Microsoft's operating system monopoly.

8. Non-Microsoft browsers are perhaps the most significant vehicle for distribution of Java technology to end users. Microsoft has recognized that the widespread use of browsers other than its own threatens to increase the distribution and use of Java, and in so doing threatens Microsoft's operating system monopoly. For this reason, a presentation to Microsoft CEO Bill Gates on January 5, 1997, on how to respond to the Java threat emphasized "Increase IE share" as a key strategy. (MS7 005529-44).

9. Second, Microsoft recognized that Netscape's browser was itself a "platform" to which many applications were being written -- and to which (if it thrived) more and more applications would be written. Since Netscape's browser could be run on any PC operating system, the success of this alternative platform also threatened to reduce or eliminate a key

barrier protecting Microsoft's operating system monopoly. This is the threat that Microsoft's CEO Bill Gates referred to as the threat that Netscape would "commoditize" the operating system.

10. To respond to the competitive threat posed by Netscape's browser, Microsoft embarked on an extensive campaign to market and distribute Microsoft's own Internet browser, which it named "Internet Explorer" or "IE." Microsoft executives have described this campaign as a "jihad" to win the "browser war."

11. Because of its resources and programming technology, Microsoft was well positioned to develop and market a browser in competition with Netscape. Indeed, continued competition on the merits between Netscape's Navigator and Microsoft's Internet Explorer would have resulted in greater innovation and the development of better products at lower prices. Moreover, in the absence of Microsoft's anticompetitive conduct, the offsetting advantages of Microsoft's size and dominant position in desktop software and Netscape's position as the browser innovator and the leading browser supplier, and the benefit to consumers of product differentiation, could have been expected to sustain competition on the merits between these companies, and perhaps others that have entered and might enter the browser market.

12. Microsoft, however, has not been willing simply to compete on the merits. For example, as Microsoft's Christian Wildfeuer wrote in February 1997, Microsoft concluded that it would "be very hard to increase browser share on the merits of IE 4 alone. It will be more important to leverage the OS asset to make people use IE instead of Navigator." (MS7 004346). Thus, Microsoft began, and continues today, a pattern of anticompetitive practices designed to

thwart browser competition on the merits, to deprive customers of a choice between alternative browsers, and to exclude Microsoft's Internet browser competitors.

13. Microsoft's conduct with respect to browsers is a prominent and immediate example of the pattern of anticompetitive practices undertaken by Microsoft with the purpose and effect of maintaining its PC operating system monopoly and extending that monopoly to other related markets.

14. Initially, Microsoft attempted to eliminate competition from Netscape by seeking an express horizontal agreement not to compete. In May 1995, Microsoft executives met with top Netscape personnel in an attempt to induce Netscape not to compete with Microsoft and to divide the browser market, with Microsoft becoming the sole supplier of browsers for use with Windows 95 and successor operating systems and with Netscape becoming the sole supplier of browsers for operating systems other than Windows 95 or its successors. Netscape refused to participate in Microsoft's illegal scheme.

15. Having failed simply to stop competition by agreement, Microsoft set about to exclude Netscape and other browser rivals from access to the distribution, promotion, and resources they needed to offer their browser products to OEMs and PC users pervasively enough to facilitate the widespread distribution of Java or to facilitate their browsers becoming an attractive programming platform in their own right.

16. First, Microsoft invested hundreds of millions of dollars to develop, test, and promote Internet Explorer, a product which it distributes without separate charge. As Paul Maritz, Microsoft's Group Vice President in charge of the Platforms Group, was quoted in the New York Times as telling industry executives: "We are going to cut off their air supply.

Everything they're selling, we're going to give away for free." As reported in the Financial Times, Microsoft CEO Bill Gates likewise warned Netscape (and other potential Microsoft challengers) in June 1996: "Our business model works even if all Internet software is free. . . . We are still selling operating systems. What does Netscape's business model look like? Not very good."

17. But Mr. Gates did not stop at free distribution. Rather, Microsoft purposefully set out to do whatever it took to make sure significant market participants distributed and used Internet Explorer instead of Netscape's browser -- including paying some customers to take IE and using its unique control over Windows to induce others to do so. For example, in seeking the support of Intuit, a significant application software developer, Mr. Gates was blunt, as he reported in a July 1996 internal e-mail:

I was quite frank with him [Scott Cook, CEO of Intuit] that if he had a favor we could do for him that would cost us something like \$1M to do that in return for switching browsers in the next few months I would be open to doing that. (MS6 6007642).

18. Second, Microsoft unlawfully required PC manufacturers, as a condition of obtaining licenses for the Windows 95 operating system, to agree to license, preinstall, and distribute Internet Explorer on every Windows PC such manufacturers shipped. By virtue of the monopoly position Windows enjoys, it was a commercial necessity for OEMs to preinstall Windows 95 -- and, as a result of Microsoft's illegal tie-in, Internet Explorer -- on virtually all of the PCs they sold. Microsoft thereby unlawfully tied its Internet Explorer software to the Windows 95 version of its monopoly operating system and unlawfully leveraged its operating

system monopoly to require PC manufacturers to license and distribute Internet Explorer on every PC those OEMs shipped with Windows.

19. Third, Microsoft intends now unlawfully to tie its Internet browser software to its new Windows 98 operating system, the successor to Windows 95. Microsoft has made clear that, unless restrained, it will continue to misuse its operating system monopoly to artificially exclude browser competition and deprive customers of a free choice between browsers.

20. Microsoft designed Windows 98 so that removal of Internet Explorer by OEMs or end users is operationally more difficult than it was in Windows 95. Although it is nevertheless technically feasible and practicable to remove Microsoft's Internet browser software from Windows 98 and to substitute other Internet browser software, OEMs are prevented from doing so by Microsoft's contractual tie-in.

21. Internet browsers are separate products competing in a separate product market from PC operating systems, and it is efficient to supply the two products separately. Indeed, Microsoft itself has consistently offered, promoted, and distributed its Internet browser as a stand-alone product separate from, and not as a component of, Windows, and intends to continue to do so after the release of Windows 98. For example, Microsoft will make available separately the same Internet browser that is bundled with Windows 98, through an upgraded version of Internet Explorer 4 that will be distributed and installed wholly apart from Windows 98, including for non-Windows, non-Microsoft operating systems. In addition Microsoft already plans to introduce a subsequent version of IE (Internet Explorer 5) that also will be distributed and installed separately from Windows 98, including for non-Windows, non-Microsoft operating systems.

22. Microsoft's tying of its Internet browser to its monopoly operating system reduces the ability of customers to choose among competing browser products because it forces OEMs and other purchasers to license or acquire the tied combination whether they want Microsoft's Internet browser or not. Microsoft's tying -- which it can accomplish because of its monopoly power in Windows -- impairs the ability of its browser rivals to compete to have their browsers preinstalled by OEMs on new PCs and thus substantially forecloses those rivals from an important channel of browser distribution.

23. Microsoft executives have repeatedly recognized the significant advantage that Microsoft (and only Microsoft) receives by tying its Internet browser to its operating system, rather than having to compete on the merits. As Microsoft Senior Vice President James Allchin wrote to Microsoft Group Vice-President Paul Maritz on January 2, 1997:

You see browser share as job 1 I do not feel we are going to win on our current path. We are not leveraging Windows from a marketing perspective. . . . We do not use our strength -- which is that we have an installed base of Windows and we have a strong OEM shipment channel for Windows. Pitting browser against browser is hard since Netscape has 80% marketshare and we have < 20% I am convinced we have to use Windows — this is the one thing they don't have
(emphasis added) (MS7 005526).

24. Fourth, Microsoft has misused, and continues to misuse, its Windows operating system monopoly by requiring PC OEMs to agree, as a condition of acquiring a license to the Windows operating system, to adopt the uniform "boot-up" sequence and "desktop" screen specified by Microsoft. This sequence determines the screens that every user sees upon turning on a Windows PC. Microsoft's exclusionary restrictions forbid, among other things, any changes by an OEM that would remove from the PC any part of Microsoft's Internet Explorer

software (or any other Microsoft-dictated software) or that would add to the PC a competing browser (or other competing software) in any more prominent or visible way (including by highlighting as part of the startup sequence or by more prominent placement on the desktop screen) than the way Microsoft requires Internet Explorer to be presented.

25. Virtually every new PC that comes with Windows, no matter which OEM has built it, presents users with the same screens and software specified by Microsoft. As a result of Microsoft's restrictive boot-up and desktop screen agreements, OEMs are deprived of the freedom to make competitive choices about which browser or other software product should be offered to their customers, the ability to determine for themselves the design and configuration of the initial screens displayed on the computers they sell, and the ability to differentiate their products to serve their perceptions of consumers' needs.

26. These restrictive agreements also maintain, and enhance the importance of, Microsoft's ability to provide preferential placement on the desktop (or in the boot-up sequence) to various Internet Service Providers ("ISPs") and Internet Content Providers ("ICPs"), in return for those firms' commitments to give preferential distribution and promotion to Internet Explorer and to restrict their distribution and promotion of competing browsers.

27. As a result, these restrictions further exclude competing Internet browsers from the most important channels of distribution, substantially reduce OEMs' incentives and abilities to innovate and differentiate their products in ways that could facilitate competition between Microsoft products and competing software products, and enhance Microsoft's ability to use the near-ubiquity of its Windows operating system monopoly to gain dominance in both the Internet browser market and other software markets.

28. Fifth, Microsoft has entered into anticompetitive agreements with virtually all of the nation's largest and most popular ISPs, including particularly Online Service Providers ("OLSSs"), firms which provide the communications link between a subscriber's PC and the Internet and sometimes related services and content as well. Windows 95 (and soon Windows 98) presents PC users with "folders" or lists including the names of certain of these ISPs that have entered into agreements with Microsoft and enable users readily to subscribe to their services. Because Windows is preinstalled on nearly all PCs in the United States, inclusion in these folders and lists is of substantial value to ISPs. As a result, almost all of the largest and most significant ISPs in the United States have sought placement on the Windows desktop.

29. Microsoft's agreements with ISPs allow Microsoft to leverage its operating system monopoly by conditioning these ISPs' inclusion in Windows' lists on such ISPs' agreement to offer Microsoft's Internet Explorer browser primarily or exclusively as the browser they distribute; not to promote or even mention to any of their subscribers the existence, availability, or compatibility of a competing Internet browser; and to use on their own Internet sites Microsoft-specific programming extensions and tools that make those sites look better when viewed through Internet Explorer than when viewed through competing Internet browsers.

30. Microsoft's anticompetitive agreements with ISPs have substantially foreclosed competing browsers from this major channel of browser distribution. Over thirty percent of Internet browser users have obtained their browsers from ISPs.

31. Microsoft has recently modified certain of its ISP agreements to reduce some of these restrictions. However,

a. the modifications do not affect Microsoft's illegal agreements with On-Line Service Providers (e.g., America Online, CompuServe), which serve the majority of Internet users in the United States;

b. even the modified agreements remain unlawful in other respects;

c. the modifications do not address the anticompetitive effects such agreements have already caused; and

d. there is no assurance that Microsoft will not reimpose the restrictions in the future.

32. Sixth, Microsoft has entered into anticompetitive agreements with Internet Content Providers ("ICPs"). Prominent "channel buttons" advertising and providing direct Internet access to select ICPs appear on the "Active Desktop" feature that is shipped with the Windows operating system.

33. Microsoft's agreements condition an ICP's placement on one of these buttons on the ICP's agreement to not pay or otherwise compensate Microsoft's primary Internet browser competitors (including by distributing their browsers) for the distribution, marketing, or promotion of the ICP's content; to not promote any browser produced by any of Microsoft's primary browser competitors; to not allow any of Microsoft's primary browser competitors to promote and highlight the ICP's "channel" content on or for their browsers; and to design its web sites using Microsoft-specific, proprietary programming extensions so that those sites look better when viewed with Internet Explorer than when viewed through a competing browser. These

illegal agreements further inhibit competition on the merits between Internet Explorer and other Internet browsers.

34. As with some of its restrictive ISP agreements, Microsoft has recently announced certain modifications of its anticompetitive ICP agreements. However, these modifications do not remedy the anticompetitive effects such agreements have had and do not prevent Microsoft from entering into the same or similar agreements in the future.

35. Collectively, Microsoft's contracts with OEMs, ISPs, and ICPs have unreasonably restrained, and, unless enjoined, will continue to unreasonably restrain competition in the market for Internet browsers. They artificially increase the share of the market held by Microsoft's Internet Explorer, and they threaten to "tip" the market permanently to Internet Explorer, not because OEMs or PC customers have freely chosen Microsoft's product in a competitive marketplace, but because of the illegal exercise of monopoly power by Microsoft.

36. Neither the antitrust laws nor this action seeks to inhibit Microsoft from competing on the merits by innovation or otherwise. Rather, the Complaint challenges only Microsoft's concerted attempts to maintain its monopoly in operating systems and to achieve dominance in other markets, not by innovation and other competition on the merits, but by tie-ins, exclusive dealing contracts, and other anticompetitive agreements that deter innovation, exclude competition, and rob customers of their right to choose among competing alternatives.

37. Microsoft's conduct adversely affects innovation, including by:

- a. impairing the incentive of Microsoft's competitors and potential competitors to undertake research and development, because they know that Microsoft will be able to limit the rewards from any resulting innovation;

- b. impairing the ability of Microsoft's competitors and potential competitors to obtain financing for research and development;
- c. inhibiting Microsoft's competitors that nevertheless succeed in developing promising innovations from effectively marketing their improved products to customers;
- d. reducing the incentive and ability of OEMs to innovate and differentiate their products in ways that would appeal to customers; and
- e. reducing competition and the spur to innovation by Microsoft and others that only competition can provide.

38. The purpose and effect of Microsoft's conduct with respect to Internet browsers have been and, if not restrained, will be:

- a. to preclude competition on the merits between Microsoft's browser and other browsers;
- b. to preclude potential competition with Microsoft's operating system from competing browsers and from other companies and software whose use is facilitated by these browsers;
- c. to extend Microsoft's Windows operating system monopoly to the Internet browser market; and
- d. to maintain Microsoft's Windows operating system monopoly.

II. JURISDICTION, VENUE, AND COMMERCE

39. This Court has jurisdiction over this matter pursuant to Section 4 of the Sherman Act, 15 U.S.C. § 4, and 28 U.S.C. §§ 1331, 1337.

40. Venue is proper in this District under Section 12 of the Clayton Act, 15 U.S.C. § 22, and under 28 U.S.C. § 1391, because defendant Microsoft transacts business and is found within this District.

41. Microsoft is a corporation organized and existing under the laws of the State of Washington, with its principal place of business located at One Microsoft Way, Redmond, Washington. Microsoft sells and licenses PC operating systems throughout the United States and the world and delivers copies of its operating systems to OEMs and retail customers across state lines and international borders. Microsoft is engaged in, and its activities substantially affect, interstate and foreign commerce.

III. PRIOR RELATED PROCEEDINGS

A. The July 1994 Monopolization Case

42. On July 15, 1994, the United States commenced an action against Microsoft under Section 2 of the Sherman Act for unlawfully maintaining its monopoly in the market for PC operating systems. The complaint alleged, among other things, that Microsoft had engaged in anticompetitive agreements and marketing practices directed at OEMs. These agreements included agreements that required OEMs to pay Microsoft for each non-Microsoft operating system that they distributed and long-term agreements that required unreasonably large minimum commitments from OEMs. The effect of Microsoft's practices and agreements was unlawfully to maintain its monopoly in the PC operating system market.

43. Microsoft consented to the entry of a final judgment, and the Court entered the Final Judgment on August 21, 1995. The Final Judgment prohibited Microsoft from continuing

the challenged practices and agreements and prohibited Microsoft from engaging in certain other conduct that could have similar anticompetitive results, including (in Final Judgment § IV(E)) enjoining Microsoft from conditioning licenses to its operating system on an OEM's either licensing another Microsoft product or agreeing not to license or distribute a non-Microsoft product.

44. The purpose of § IV(E) of the Final Judgment was to prevent Microsoft from conditioning access to its monopoly operating system in order to protect or extend that monopoly. *See* Competitive Impact Statement, 50 Fed. Reg. 42845, 42852 (1994).

B. The October 1997 Contempt Proceeding

45. On October 20, 1997, the United States petitioned the Court for an order to show cause why Microsoft should not be found in civil contempt for violating the 1995 Final Judgment by requiring OEMs to license and distribute Microsoft's Internet browser as a condition of obtaining a license for Microsoft's Windows 95 operating system.

46. On December 11, 1997, the Court entered a preliminary injunction enjoining Microsoft "from the practice of licensing the use of any Microsoft personal computer operating system software (including Windows 95 or any successor version thereof) on the condition, express or implied, that the licensee also license and preinstall any Microsoft Internet browser software (including Internet Explorer 3.0, 4.0, or any successor versions thereof) pending further order of Court."

C. The December 1997 Contempt Proceeding

47. On December 15, 1997, Microsoft -- without seeking any modification or clarification of the Court's order and without consulting the United States -- publicly announced

that any OEM that did not agree to license and distribute Microsoft's Internet Explorer could not obtain a license to a working, current version of Microsoft's Windows operating system.

Microsoft announced that the only versions of Windows 95 available to OEMs that declined to license and distribute Microsoft's Internet browser would be (1) a version of Windows 95 that Microsoft itself admitted would not work and (2) a two-and-a-half-year-old version of Windows 95 that Microsoft admitted was not commercially viable.

48. On December 17, 1997, the United States moved to have Microsoft held in contempt for this clear violation of the Court's December 11, 1997 Order. On January 21, 1998, the United States and Microsoft submitted a stipulated proposed order, which was entered by the Court. The Order required Microsoft to provide OEMs with two options in addition to those previously provided by Microsoft:

a. the option of installing on their PCs a version of Windows 95 that was the same as the current December 1997 version of Windows 95 (OEM Service Release 2.5)

“with the sole exception of Internet Explorer 4.0 functionality” not included; and

b. the option of shipping their PCs after removing the Internet Explorer “icon” from the desktop and from the “Start menu” within Windows 95.

D. The Appeal of the Court's December 1997 Order

49. Microsoft appealed the Court's December 1997 order, arguing that since the United States had there brought an action for contempt and for permanent injunctive relief and not explicitly for a preliminary injunction, it was improper for the Court to have entered a preliminary injunction (even though the restraint of a preliminary injunction was less than the restraint that would have been imposed by a finding of contempt); that since the United States

was there seeking to enforce the Final Judgment and had not commenced a new action under the antitrust laws, the alleged “integration” of Windows 95 and Microsoft’s IE browser was a complete defense; and that antitrust tie-in principles and precedents could not be used to construe the Final Judgment.

50. Microsoft believed the Court’s December Order “prima facie applied to Windows 98.” Nevertheless, Microsoft did not seek a “further order” of the Court regarding Windows 98, nor did it plan to offer an unbundled version of Windows 98. When the United States was informed of Microsoft’s Windows 98 plans, it offered to join Microsoft in a motion to the Court seeking clarification of the December Order. Instead, Microsoft moved on May 5, 1998, in the Court of Appeals for a stay of the December Order as it applied to Windows 98.

51. On May 12, 1998, the Court of Appeals granted Microsoft’s application for a stay, holding: “To the extent that the preliminary injunction awards the United States relief to which it has made no effort to show an entitlement under the consent decree, we must grant the stay.” The Court also held: “The United States presented no evidence suggesting that Windows 98 was not an ‘Integrated Product’ and thus exempt from the prohibitions of Section IV(E)(I).”

52. The United States now brings this action explicitly for preliminary and permanent injunctive relief, and demonstrates that Microsoft’s conduct constitutes clear violations of Sections 1 and 2 of the Sherman Act and will cause irreparable injury in the absence of preliminary relief.

IV. THE RELEVANT MARKETS

53. There are two relevant product markets: The market for personal computer operating systems, and the market for Internet browsers.

A. The PC Operating System Market

54. The market for personal computer operating systems consists of operating systems written for the Intel x86/Pentium (or "PC") class of microprocessors. These microprocessors perform central processing unit ("CPU") functions for the vast majority of personal computers, and their operating systems manage the interaction between the CPU and the various pieces of hardware, such as a monitor or printer, attached to such computers. Operating systems also control and direct the interaction between applications, such as word processing or spreadsheet programs, and the CPU. No other product duplicates or fully substitutes for the operating system. The geographic market for PC operating systems is worldwide.

55. Because of the complex interactions among operating system software, applications software, and the hardware attached to the PC, an operating system written for one class of microprocessors typically will not work on another class of microprocessors without significant modification. Thus, OEMs and PC users do not consider an operating system that runs a non-Intel-based personal computer to be an effective substitute for an operating system that runs an Intel-based personal computer.

B. The Internet Browser Market

56. Internet browsers are specialized software programs that allow PC users conveniently to locate, access, display, and manipulate content and applications located on the web. Internet browsers are essential for quick, easy, and efficient use of the web and have been

instrumental in building the Internet's popularity. No other product duplicates or fully substitutes for the functionality of Internet browsers. The geographic market for Internet browsers is worldwide.

C. Microsoft's Windows Operating System Monopoly

57. Microsoft markets a variety of PC operating systems, including MS-DOS, Windows 3.11, Windows For Workgroups, Windows NT Workstation, and Windows 95. Beginning in or around June 1998, Microsoft will introduce to the market the latest version of its operating system for Intel-based PCs, Windows 98.

58. Microsoft has maintained a monopoly share (in excess of 80%) of the PC operating system market over an extended period of time. The durability of Microsoft's market power in part reflects the fact that the PC operating system market is characterized by certain economies of scale in production and by significant "network effects." In other words, the PC operating system for which there are the greatest number, variety, and quality of applications will be selected by the large majority of PC users, and in turn writers of applications will write their programs to work with the most commonly used operating system, in order to appeal to as many potential customers as possible. Economies of scale and network effects, which reinforce one another, result in high barriers to entry.

59. The primary channel through which Microsoft distributes its operating systems is preinstallation on new PCs by OEMs. Because a PC can perform virtually no useful tasks without an operating system, OEMs consider it a commercial necessity to preinstall an operating system on nearly all of the PCs they sell. And because there is no viable competitive alternative to the Windows operating system for Intel-based computers, OEMs consider it a commercial

necessity to preinstall Windows on nearly all of their PCs. Both OEMs and Microsoft recognize that OEMs have no commercially viable substitute for Windows, and that they cannot preinstall Windows on their PCs without a license from Microsoft. For example:

a. Packard Bell executive Mal Ransom testified that there were no commercially feasible alternative operating systems to Windows 98 (M. Ransom 3/19/98 Tr. 19-20);

b. Micron executive Eric Browning asserted: "I am not aware of any other non-Microsoft operating system product to which Micron could or would turn as a substitute for Windows 95 at this time." (E. Browning Declaration, para. 11);

c. Hewlett Packard executive John Romano testified that "absolutely there's no choice" except to install Windows on HP's PCs (J. Romano Tr. 49-50); and

d. Gateway executive James Von Holle testified that Gateway had to install Windows because "We don't have a choice." (J. Von Holle Tr. 37-41; GW 26521-27). Mr. Von Holle has testified that if there were competition to Windows he believed such competition "would drive prices lower" and promote innovation (Ibid.).

60. When Windows 98 is released, it will quickly succeed to Windows 95's monopoly position because, among other things, applications written for Windows 95 will run on Windows 98 and most consumers who purchase PCs want and expect their PCs to have the latest Microsoft operating system. OEMs will begin shipping most PCs, particularly for non-corporate users, with the Windows 98 operating system as soon as it is released. For example, Hewlett Packard executive Webb McKinney testified that even Windows 95 would be a commercially feasible alternative to Windows 98 "[o]nly for a short period of time." (W. McKinney 3/13/98 Tr. 11-12).

