

I. Background

1. On May 18, 1998, plaintiffs the United States and twenty States and the District of Columbia filed actions against defendant Microsoft Corporation, alleging violations of the Sherman Act, 15 U.S.C. §§ 1 & 2, and the antitrust and consumer protection laws of the respective plaintiff States. The actions were consolidated, and expedited discovery ensued. Trial began on October 18, 1998, and concluded on June 26, 1999.

2. Defendant Microsoft Corporation (“Microsoft”) is a corporation organized under the laws of the State of Washington with its headquarters in Redmond, Washington.

i. Answer ¶ 41.

3. Microsoft’s principal business is the licensing of computer software, which it conducts on a world-wide basis. Microsoft licenses computer software throughout the United States and elsewhere and delivers operating systems to computer manufacturers and others across states lines and international borders, and its business has had a substantial effect on interstate commerce.

i. Answer ¶ 5.

4. Microsoft, among other things, licenses operating system and application software for personal computers. The personal computer industry, which has seen tremendous growth over the last decade, is an important, robust sector of the United States economy. Microsoft software dominates critical sectors of that industry.

i. See infra Part II (Microsoft possess monopoly power in operating systems).

ii. Tevanian Dir. ¶¶ 6, 14, 22, 35 (Microsoft is also dominant in a number of applications, including office productivity suites).

5. A Personal Computer (“PC”) is a computer designed for use by one person at a time.
 - i. Microsoft Press Computer Dictionary, at 361 (3d ed. 1997) (GX 1050).

5.1. PCs (which include both desktop and laptop models), can be distinguished from more powerful, more expensive computers known as Servers, which are designed to provide services and functionality to multiple users, either in local area network or over the Internet.

- i. Warren-Boulton Dir. ¶ 20.
- ii. Microsoft Press Computer Dictionary, at 430 (3d ed. 1997) (GX 1050).

5.2. A typical PC system consists of a number of components, including a microprocessor, dynamic memory, a hard disk, a keyboard, a monitor, and an operating system.

- i. Warren-Boulton Dir. ¶ 20.

6. PCs are built primarily by firms known as Original Equipment Manufacturers (“OEMs”). OEMs typically purchase from different third-party vendors and preinstall various hardware and software components for their systems, including the operating system and application software.

- i. Warren-Boulton Dir. ¶ 23.

7. OEMs develop and sell their PCs to consumers in a competitive market and design their PCs and their hardware and software features to respond to consumer demand.

- i. See infra Part II.A; ¶ 15.1.1.
- ii. Warren-Boulton Dir. ¶ 24.

8. An Operating System is the “central nervous system” of the PC.

- i. Barksdale Dir. ¶ 69.

8.1. An operating system performs two basic functions. First, the operating system allows the various components of the PC to communicate and function with each other; it provides “the software that controls the allocation and usage of hardware resources such as memory, central processing unit time, disk space, and peripheral devices.”

- i. Microsoft Press Computer Dictionary, at 341 (3d ed. 1997).
- ii. Farber Dir. ¶ 11 (the operating system “controls the execution of programs on computer systems and may provide low-level services such as resource allocation, scheduling and input-output control in a form which is sufficiently simple and general so that these services are broadly useful to software developers”).

8.2. Second, an operating system provides a “platform” by exposing Applications Programming Interfaces (“APIs”) that applications use to “call upon” the operating system’s underlying software routines in order to perform various functions, such as displaying a character on a monitor.

- i. Schmalensee Dir. ¶¶ 93-94.

9. An Application is a software program “used to perform specific user-oriented tasks”.

- i. Farber Dir. ¶ 11.

9.1. Applications typically “run on top” of the operating system and draw upon the services that the operating system’s “platform” provides.

- i. Warren-Boulton Dir. ¶ 22

9.2. The term Platform is used in the software industry to describe software that “provides features or services that can be used by software applications.”

- i. Schmalensee Dir. ¶ 93.

10. Microsoft produces a number of PC operating systems, including MS-DOS and

successive versions of its Windows operating system, the most recent version of which is Windows 98. Since at least the mid-1990s, Microsoft has dominated the market for PC operating systems. As will be explained, Microsoft's market share has remained well in excess of 90% during that period.

i. See infra Part II.B.2; ¶ 21.

11. Applications are produced by numerous firms, including firms like Microsoft that also produce operating systems and others, known as Independent Software Vendors ("ISVs"). Microsoft's application software is dominant in several key categories, most notably in office productivity suites.

i. See infra Part V.F.1.b.(1).; ¶ 287.2.1.

12. All the components of a PC system -- the microprocessor and other hardware, operating system, and applications software -- must be compatible with each other. For instance, software, including the operating system and applications, must be designed to be compatible with the PC's microprocessor, and application software must be compatible with the operating system.

12.1. There are different types of PC systems.

12.1.1. An Intel-compatible PC is one designed to function with Intel's x86/Pentium families of microprocessors or compatible microprocessors manufactured by Intel or other firms. Microsoft's Windows operating system, and different types of UNIX operating systems, are examples of operating systems that run on Intel-compatible PCs.

i. Fisher Dir. ¶ 62.

12.1.2. There are other types of PCs that use microprocessors that are not

Intel-compatible, such as the Apple Macintosh computer system. Operating systems designed to run on Intel-compatible PCs, known as Intel-compatible PC operating systems, will not function on an incompatible PC like the Macintosh; and operating systems designed for an incompatible PC like the Macintosh will not function on an Intel-compatible PC.

- i. Gosling Dir. ¶ 7.

12.2. Applications programs are typically written to run on a particular operating system and cannot run on other operating systems unless the developer goes to the time and expense to “port” the program to the other operating system. For example, the version of Microsoft’s popular Office productivity suite designed to run on Microsoft’s Windows operating system cannot run on the Apple Macintosh or even on other Intel-compatible operating systems.

- i. See infra II.B.3.b.(1); ¶ 26.1.2.

13. One of the most important applications today is an Internet Web browser (“browser”).

13.1. A browser is a “client application that enables a user to view HTML documents on the World Wide Web, another network, or the users’s computer; follow the hyperlinks among them; and transfer files.” A browser enables “the user to examine, display, scan, and navigate via the Internet” information located on the “Web.”

- i. Microsoft Press Computer Dictionary, at 505 (3d ed. 1997) (GX 1050).
- ii. Farber Dir. ¶ 11.

13.1.1. The Internet is a global network that links many millions of PCs and a smaller number of servers together. Begun in the early 1960s, the Internet exploded in popularity with the emergence of the World Wide Web (“Web”) in the mid-1990s.

- i. Maritz Dir. ¶ 50.

13.1.2. “The Internet is a global network of computers constructed by patching together many local area networks that use widely varying communication media such as telephone lines, dedicated data cables, and wireless links.” The Internet links PCs by means of servers, which run specialized operating systems and applications designed for servicing a network environment.

- i. Felten Dir. ¶ 11.

13.1.3. In simplest terms, servers host and provide access to the Internet’s content. In the case of the Web, this content consists principally of Web Pages, which are created by Internet Content Providers (“ICPs”). There are millions of web pages located on the thousands of servers that comprise the Internet.

- i. See infra Part V.E.1.a; ¶ 255.

13.1.4. Web pages can be accessed over those thousands of servers from millions of PCs because the Internet uses a number of widely-accepted standards. For instance, web pages are typically written in Hypertext Markup Language (HTML) and are transferred between servers and PCs using a common protocol known as Hypertext Transfer Protocol (HTTP).

- i. Felten Dir. ¶ 13. (The Web is “characterized by a set of standard data formats, including HyperText Markup Language (‘HTML’), and a set of standard communication protocols, such as HyperText Transfer Protocol (‘HTTP’), that together allow computers to share multimedia documents that may contain links to other such documents.”).

13.1.5. Consumers typically access the Internet through the services of an

Internet Access Provider, which can be an Internet Service Provider (“ISP”), such as Earthlink or AT&T Worldnet, or an On-Line Service (“OLS”), such as America Online or Prodigy. Internet access providers are commercial firms that connect users to the network of servers that comprise the Internet.

i. See infra V.D.1; ¶ 213.

13.2. Although graphical web browsers have existed since 1993, the first widely-popular commercial graphical browser was developed and brought to market by Netscape Communications in late 1994. Microsoft introduced its browser, Internet Explorer, in 1995.

i. See infra Part III.B.1; ¶ 53.1.1; Part V.B.2.c; ¶ 126.