

EXHIBIT B

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

<p>UNITED STATES OF AMERICA, Plaintiff, vs. MICROSOFT CORPORATION, Defendant.</p>	<p>Civil Action No. 98-1232 (TPJ)</p>
<p>STATE OF NEW YORK <i>ex rel.</i> Attorney General DENNIS C. VACCO, <i>et al.</i>, Plaintiffs, vs. MICROSOFT CORPORATION, Defendant.</p>	<p>Civil Action No. 98-1233 (TPJ)</p>
<p>MICROSOFT CORPORATION, Counterclaim-Plaintiff, vs. DENNIS C. VACCO, Attorney General of the State of New York, In his official capacity, <i>et al.</i>, Counterclaim-Defendants.</p>	<p>FILED UNDER SEAL</p>

DIRECT TESTIMONY OF PAUL MARITZ

[Corrected Version]

MS-PCA 1051170

DIRECT TESTIMONY OF PAUL MARITZ

1. My name is Paul Maritz. I am Group Vice President, Platforms and Applications of Microsoft Corporation. I am responsible for the development and marketing of most desktop and server software at Microsoft, including all versions of Windows.
2. I graduated from the University of Cape Town in South Africa in 1977 with a Bachelor of Science (Honours) degree in Computer Science and Mathematics. After working as a programmer for Burroughs (now part of Unisys) in London, and at the University of St. Andrews in Scotland, I joined Intel in California in 1981. I spent five years at Intel overseeing the marketing and development of tools to help create software for use with Intel microprocessors.
3. I came to Microsoft in 1986. My first responsibilities at Microsoft involved a Microsoft operating system product called XENIX, which at the time was the most popular commercial version of UNIX. In 1987, I took on responsibility for Microsoft's networking software product called LAN Manager. In 1989, I relinquished responsibility for LAN Manager and assumed responsibility for the OS/2 operating system then being jointly developed by Microsoft and IBM. I also assumed responsibility for a more advanced operating system, Windows NT, that was released by Microsoft in 1993. In March 1992, I assumed responsibility for all of Microsoft's Windows operating system software and in 1995 also took on responsibility for Microsoft's developer tools and server application products. Finally, I also assumed responsibility in late 1996 for Microsoft's desktop applications software, which includes Microsoft Office.

4. As a result of my experience, I am fully familiar with (i) Microsoft's understanding of the nature of competition in the software industry, (ii) the business model adopted by Microsoft for promoting Windows and the growth of the personal computer industry and (iii) the serious competition faced by Windows today. My testimony covers these and other subjects. Set forth below is a brief overview of my testimony.

SUMMARY OF TESTIMONY

5. My testimony is presented in six sections (plus a conclusion), briefly summarized here.

Section I: Introduction

6. Microsoft has played an important role in bringing the benefits of computers to millions of people. For more than twenty years, Microsoft has invested great effort in developing innovative new technology and broadly distributing that technology to the widest possible audience. Microsoft's efforts to develop a common platform for software development—Windows—and to promote the development of a wide range of compatible products have helped to make computers more powerful, easier to use and much less expensive. Hundreds of millions of customers, and tens of thousands of companies, have benefited from Microsoft's efforts.

7. Success in the software industry requires constant innovation and risk-taking. Rapidly changing technology and business circumstances present new challenges—and opportunities—all the time.

8. One such challenge and opportunity, for Microsoft and the entire computer industry, has been the explosive growth of the Internet in the 1990s. Though some of our competitors hoped Microsoft would be “asleep at the switch,” we have mounted a tremendous effort to reorient our entire business toward the Internet, developing a range of new operating system and applications products to help make the Internet easier to use and more useful for customers and the industry at large.

9. Competition between Microsoft and Netscape has been vigorous. As that competition illustrates, the software industry is healthy and vibrant. Rare is the industry in which a start-up could immediately pose a major competitive challenge to a leading firm such as Microsoft, but Netscape has. Today Microsoft faces a new range of competitive challenges presented by Netscape’s acquisition by America Online (“AOL”), which provides Internet access to about half of U.S. home users, and their strategic alliance with Sun Microsystems, which provides a range of client and server technologies, including Java platform technologies.

10. Tomorrow will bring new challenges. Investment in the software industry is at record levels; new competitors are entering all the time; and customers have access to new and continually improved capabilities. In particular, tens of millions of people are now using software to browse the Web that is vastly superior to the software available just two or three years ago. People who a short time ago thought they would never use a computer are now using computers for purposes they never imagined. While good for Microsoft, that is also a positive development for the entire U.S. economy.

Section II: Why the Software Industry is So Intensely Competitive

11. The computer industry in general and the software industry in particular is intensely competitive and subject to rapid change. There are several important reasons for this. Perhaps most importantly, the underlying platform on which all software runs—semiconductor technology—has been improving exponentially for the past 20 years, and will continue to do so for the foreseeable future. Every year microprocessors get faster, memories get larger and prices fall. Advances in semiconductor technology mean that every year more ambitious things can be done in software. Couple this with the fact that the software industry is still in its infancy—with many opportunities to improve existing products or create entirely new products—and one quickly sees that there is constant opportunity to innovate and unseat existing competitors. In fact, most existing software products will be rendered essentially obsolete in three years, if not sooner. Microsoft is keenly aware that any software publisher that rests on its laurels will rapidly be rendered obsolete.

12. As a result of the relentless advance in semiconductor technology and software built upon it, the computer industry is inherently unstable, unpredictable and subject to dramatic shifts, often called “inflection points” (a term made popular by Dr. Andrew Grove, the chairman of Intel). These inflection points set the computer industry apart from more traditional industries in which change is much slower and more gradual. Existing computer companies can easily stumble when faced with such dramatic change, their prior success often hindering them. These inflection points also provide a regular opportunity for new firms to enter and grow rapidly, often with products and business models that differ greatly from existing firms.

13. Indeed, in high technology industries such as computer software, the greatest competitive threat to existing products frequently comes not from similar products (*i.e.*, operating systems that compete directly with Windows today), but rather from wholly new products that render entire product categories or technology approaches obsolete. For example, the greatest competitive threat to Smith Corona typewriters came not from other typewriter companies, but rather from the development in the late 1970s of computers from Wang and others that were dedicated to a new function: “word processing.” And the greatest competitive threat to Wang came not from other vendors of dedicated word processors, but rather from the development of an all-new device: the personal computer, which could perform word processing functions, and much, much more.

14. Microsoft itself was born as the result of an important “inflection point”—from mainframe computers to less expensive, more broadly distributed “personal computers” made possible by a new technology: the microprocessor. The established computer industry leader at the time, IBM, failed to fully appreciate the significance of this important shift. That permitted start-up companies like Compaq, Dell and Gateway 2000 to become powerful players in a newly-configured computer industry.

15. Microsoft is always on the look-out for the next inflection point. Indeed, Microsoft has survived several inflection points over the past 15 years that could have spelled the end of its operating system business had Microsoft not innovated rapidly. In the late 1980s, microprocessors became fast enough and memory cheap enough to offer customers an easier way to interact with computers—the “point and click” graphical user interface. At the time, Microsoft’s principal operating system product, MS-DOS, did not

provide such an interface. If Microsoft had not responded with Windows 3.x, customers surely would have switched to competing software. Another inflection point occurred in the early 1990s, when microprocessors and memories shifted to a new level known as “32 bit.” This shift opened the door to operating system competitors such as OS/2 2.0 and UNIX, which sought to capitalize on the fact that Windows 3.x could only run a few 32-bit applications, and did so poorly. Microsoft responded, however, with a risky and unprecedented strategy—simultaneously developing two complementary 32-bit operating systems, Windows 95 and Windows NT. While difficult to implement, this proved to be an effective strategy, enabling Microsoft and its business partners to survive and, in fact, benefit from this technological shift.

16. Another major inflection point is underway now—the Internet, and the certainty that network bandwidths (which affects the speed at which information can be transmitted) will soon increase ten-fold and then one-hundred fold. The build out of this network infrastructure will undoubtedly create new challenges and opportunities that few recognize today, just as few could have seen the significance of the Internet as recently as six or seven years ago. Microsoft knows that if it does not continue to rapidly improve all its products to provide the Internet-related capabilities demanded by the marketplace, those products will quickly lose value and, before long, be rendered obsolete. That is why Microsoft has been working so hard to provide Internet support across its product line.

17. Another major inflection point is widely-recognized to be underway now: the advent of so-called “information appliances” such as “Intelligent TVs” (televisions that incorporate a computer) and small, handheld devices. IDC, a market research firm,

predicts that by the year 2001 Intelligent TVs will have greater processing power than today's personal computer. Indeed, television "set top boxes" are available today that provide more computing power than the personal computer of just a few years ago—at a small fraction of the cost. Intelligent TVs and other forms of information appliances will perform many of the functions, such as Internet access and email, performed by personal computers today.

18. Just as low cost and widely-distributed personal computers rendered large mainframe computers less important, the new breed of even cheaper and smaller computing devices may render personal computers less important. As with prior inflection points, Microsoft must mount a major response if it is to remain a viable supplier of operating system software. The outcome is uncertain at best.

19. Aside from the destabilizing effect of constant technological change, competition in the software industry is unusually intense because, unlike many traditional products, software is relatively easy for talented software engineers to develop, produce and distribute. The tools of the trade—personal computers and software development programs—are readily available. No expensive manufacturing plants are required. Once created, software can be copied once or a million times at nominal cost and distributed quickly over computer networks (such as the Internet) and in many other ways.

20. Software is also different from many products because it never wears out and can be easily copied illegally. Thus, a software company introducing a new product must compete not only against the products of existing competitors and new competitors that spring up each year, but also against prior versions of its own products and against

Microsoft viewed its business as narrowly and in such static terms as the plaintiffs' economists do, Microsoft would have been run out of business years ago.

29. Even viewed narrowly, Windows faces competition today from a number of competing operating systems such as Apple's MacOS, Be's BeOS, the various "flavors" of the UNIX operating system and the Linux operating system distributed by companies such as Caldera and Red Hat Software and IBM's OS/2 Warp. The Linux operating system, in particular, is widely-perceived to be a very serious emerging competitor to Windows. Although few had even heard of Linux a few years ago, today millions of people run Linux, major computer manufacturers are offering computers with Linux preinstalled, and major applications are available for Linux. Windows also faces competition from older versions of Windows, from so-called Windows "clones," and from illegal "pirated" copies of Windows.

30. In addition to other full-fledged operating systems, Windows faces formidable competition from "middleware" products such as Netscape's Web browsing software and Sun's Java suite. The purveyors of such middleware products are well-funded companies that have every opportunity to compete with Windows. I believe that one of the key contradictions of the testimony of plaintiffs' witnesses is how they trumpet the fact that middleware products like Netscape Navigator compete with Windows, while simultaneously asserting that such middleware products somehow exist in separate "markets."

31. Windows also faces impending competition from so-called "network computers" (which are being promoted by powerful companies like Sun, Oracle, Netscape, and IBM) and from "information appliances" such as the set-top boxes I

the Web. Mr. Berners-Lee writes in his "The World Wide Web: A very short personal history":

One of the things computers have not done for an organization is to be able to store random associations between disparate things, although this is something the brain has always done relatively well. In 1980 I played with programs to store information with random links, and in 1989, while working at the European Particle Physics Laboratory, I proposed that a global hypertext space be created in which any network-accessible information could be referred to by a single "Universal Document Identifier". Given the go-ahead to experiment by my boss, Mike Sendall, I wrote in 1990 a program called "WorldwidEweb", a point and click hypertext editor which ran on the "NeXT" machine. This, together with the first Web server, I released to the High Energy Physics community at first, and to the hypertext and NeXT communities in the summer of 1991.

(See DX 2243.)

52. Mr. Berners-Lee has since been awarded a MacArthur Foundation Genius Grant and a Distinguished Fellowship of the British Computer Society for his innovations. Much of the software he wrote, such as LibWWW, was later integrated into browser software by Netscape, Microsoft and others. He continues to drive the Web and the broader Internet forward through his work in the W3C Consortium. Neither Netscape nor Marc Andreessen and his colleagues at the National Center for Supercomputing Applications at the University of Illinois (NCSA) invented the Internet, the World Wide Web, or the concept of browsers that use hypertext navigation to traverse the Web.

53. By the mid-1990s, a combination of factors led to the explosive growth of the Internet's popularity: (i) the speed of computer modems had increased while their cost had decreased; (ii) improved, high speed data switches called routers became much cheaper; (iii) fiber optics had dramatically improved the cost and capacity of long distance communications; and (iv) millions of computer users now had a graphical

environment (Windows) on their computers. In view of these factors, many companies recognized that conditions were ripe for the Internet and its uses, including e-mail and Web browsing, to spread from the academic world to the general populace.

54. Dozens of companies, including Netscape, sprang up in 1994 and 1995 to develop new technologies that would make the Internet accessible first to millions, then tens of millions, of people. Hundreds of existing companies, including Microsoft, Apple, IBM, Sun Microsystems, Novell, Oracle, SAP and Intuit began to add Internet capabilities to their products.

C. Microsoft's Response to the Internet

55. Bill Gates and others at Microsoft called the Internet phenomenon a “sea change” and, later, a “tidal wave.” For Microsoft, the Internet was both a challenge and an opportunity, a giant step on the way to a vision the company had long held—that computers would enable users to access information anywhere, anytime, quickly and easily. Since 1990, Microsoft had promoted that vision as “Information at Your Fingertips.” At the same time, the Internet created the very real possibility that Microsoft and its products would quickly be rendered irrelevant if Microsoft did not rapidly enhance its software products to promote and take advantage of the benefits of the Internet.

56. We could have been complacent, letting the Internet tidal wave crash down upon us. Or we could seek to ride the wave. Some in the industry hoped that Microsoft would fail to appreciate and respond to the significance of the Internet—that just as the mainframe and minicomputer industry had inadequately responded to the