

ANTITRUST
REFORM PROJECT

**THE CASE AGAINST
THE CASE AGAINST MICROSOFT**

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EXECUTIVE SUMMARY

The current antitrust case against Microsoft has no policy merit. It substitutes the judgments of court experts, economists and antitrust attorneys for the consensual transactions between Microsoft and its competitors and partners, and even consumers themselves, and ignores basic points of sound law, economics and computer science.

The rapidly evolving nature of computer science presents both consumers and producers with a *standardization/innovation tradeoff*. People can, at any time, spend their time and labor on newer, faster machines and more powerful software, but in so doing may sacrifice valuable investments of time and labor on older computer and programs. The question is not whether there is such a tradeoff, but how to make it.

On the one hand, entrepreneurs who generate new ideas and knowledge (for example, Sun Microsystems with its Java programming language) will seek to persuade consumers to give up their money and their familiar desktop programs, claiming that the benefits of switching outweigh the costs of learning how to use new software. On the other hand, companies who have a stake in prevailing standards (for example, Microsoft) will attempt to persuade consumers that it's easier to stick with what they know. Either may attempt to minimize the costs of adopting the new by supporting existing standards within the context of newer knowledge. This sorting process provides essential information to consumers, increasing their wealth – especially in an economy where information is king.

In Microsoft's case, the merging of the Web browser and the operating system represents an important part of its effort to survive transcendence of the desktop. But regardless of how the negotiations and interactions between producers and consumers are carried out, the competitive process of the market is the only way to get the correct point in the tradeoff. Only market processes are sufficiently complex and decentralized enough to manage and incorporate the millions of different decisions that consumers make daily. Furthermore, the market is the only decision process compatible with the values of a free society. For the Department of Justice (DOJ) to infer *a priori* that a particular point in the standardization/innovation tradeoff is optimal—in this case requiring that an operating system be separate from a browser or other applications—over the verdict of the marketplace is at best the arbitrary substitution of some people's judgment for others, and at worst a perversion of the rule of law.

The other DOJ attack has been to accuse Microsoft of behaving monopolistically. In fact, a review of pricing data shows conclusively that Microsoft has not behaved like a monopoly, even as it became dominant

in key software sectors. Below is a table of inflation-adjusted software prices based on advertisements in computing magazines over the last nine years.

Microsoft Software Price History (1990 dollars)			
<u>Product</u>	<u>1990 price</u>	<u>1999 price</u>	<u>% change</u>
Excel	\$320	\$228	-29%
Excel upgrade	\$320	\$ 72	-77%
Word	\$213	\$228	+ 7%
Word upgrade	\$213	\$ 57	-73%
Windows	\$125	\$137	+10%
Windows upgrade	\$125*	\$ 68	-46%

**Upgrade not yet available*

When viewed in light of the dramatic increase in functionality and power of Microsoft products over the past decade, Microsoft's pricing behavior becomes even more benevolent.

This case is an example of how government intervention in high-technology industries does more harm than good. Computer scientists, entrepreneurs and consumer advocates everywhere should call for its dismissal.

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OVERVIEW: BETTER ENGINEERS THAN LAWYERS

Microsoft's fumbling of its videotape presentation in court in February hints that Microsoft's engineers may be better than its lawyers. But, to be fair, they're under a lot of pressure. After all, for over three years, the DOJ has pursued antitrust complaints against the world's largest software company. Because the company's founder is the world's richest man, and because the company has achieved an unprecedented role in shaping the computer industry, the case has captured the attention of the popular media. This case's outcome will have a significant impact on the future of America's computer industry and on consumers.

Regardless of popular feelings about Microsoft – the company is both loved and loathed — the case has no policy merit. It is a slap in the face of an American success story. Successful business leaders, entrepreneurs and computing professionals everywhere should call for the dismissal of United States v Microsoft. It is an affront to the concept of customer choice, and victimizes those wanting to use computers and time in the most efficient, effective way possible.

BACKGROUND: SIMPLICITY AND STANDARDIZATION ARE KEY

In order for computer non-specialists to easily use a computer, it must perform many tasks in a simple and intuitive manner. The more these tasks are performed behind the scenes, quietly and efficiently, the easier the machine is to use. These tasks include processing mouse movements, managing the files on the hard disk, handling memory, starting programs when instructed and so forth. Modern computers now handle these tasks so effectively that we never think about them. But this ease of use enjoyed today did not happen accidentally. It is the remarkable result of human ingenuity, applied toward the creation of a single computer program.

This program is the *operating system*. The operating system is the program that the computer starts running when it is switched on. During startup, the operating system performs some checks of the computer and disk

Requiring that a browser be separate from an operating system is at best the arbitrary substitution of some people's judgment for others, and at worst a perversion of the rule of law.

drive. It determines whether devices like a printer and scanner are connected to the computer and presents a startup screen. It then waits for mouse or keyboard commands from the user.

The most popular operating system is Microsoft Windows, currently released as Windows 98. Other operating systems include the MacOS (found in all Macintosh computers), Unix (a public domain system with its roots in academic and industrial research) and IBM's OS/2. Differences between operating systems are the primary sources of differences between computers in the marketplace. The operating system, more than anything else, contributes to the characteristic "look and feel" of a particular computer.

But if look and feel were all that mattered, Microsoft would still be begging for venture capital and Bill Gates would be just another college dropout. Operating systems also provide standardization, the ability to run the same programs, like word processors or spreadsheets, on different computers. Standardization also allows files to be transferred easily among computers. Both producers and consumers of software highly value standardization. Accordingly, it commands high premiums in the marketplace.

OS standardization ensures that programmers need make only one version of their program for each OS, instead of one version for each computer.

HOW OPERATING SYSTEMS PROVIDE STANDARDIZATION

The operating system provides other important functions that users can take for granted. Application programs like Quicken, Word and Doom rely on hundreds of functions that operating systems provide: drawing pictures, printing characters on the screen, providing dialog boxes for interacting with users and so forth.

These operating system features provide two important market functions. First, they reduce the time it takes to write programs. Software engineers only have to write code unique to their application, not endlessly reinvent the wheels of features common to most programs. It's the same advantage architects enjoy when they design a home: They can specify what the kitchen looks like without having to design a range, microwave and refrigerator.

Second, operating system services provide *standardization*. When a computer company releases the technical details of its operating system, programmers know that if their software uses those services correctly, it will run on any computer featuring that operating system. This means that they need make only one version of their program for each OS, instead of one version for each computer. This saves an enormous amount of time. It also provides significant convenience for consumers, who may buy software products secure in the expectation that they will run on any computer with the same operating system, instead of only one machine.

Standardization of software is now so much a part of our lives that we don't think about it anymore. Can you imagine what it would be like to have your word processing program run on one PC but no other? Things weren't always this way, however. There is nothing special about computing, no scientific law that compels standardization. Today's computing professionals could write hundreds of operating systems tomorrow, all different from each other, all competing with each other, and all completely incompatible with each other. Fortunately, we don't waste our time on such an obviously unproductive task.

Standardization creates wealth by preserving and properly allocating the scarce resources needed to develop software: human time and effort. Microsoft's recognition of the importance of standardization, and its attempts to capitalize on the high value of standardization in the marketplace, are the single most important factors in the company's success. The value of standardization to consumers has important implications for the DOJ's case.

STANDARDIZATION VS. INNOVATION

But if standardization has some obvious advantages, it also has some temporary drawbacks. Over time, human knowledge increases. Economic progress follows scientific discovery. As humanity gains new knowledge through experimentation and study of the world, newer theories and techniques are developed that displace existing ones. A round earth replaces a flat one. A sun-centered solar system replaces an Earth-centered one. This doesn't mean that the older theories were "bad," only that they were the best available given what humanity knew.

Similarly, as consumers adopt entrepreneurs' discoveries and new ideas, old standards and products become obsolete. New ideas and discoveries reveal better ways to accomplish tasks. As new knowledge percolates throughout society, old standards fade and new methods emerge. This does not make older standards and products "bad," only less advantageous in light of newer knowledge. Were the reality otherwise, we would still be driving Model Ts and using rotary phones.

But to abandon a standard, to replace an older product with a newer one, we must reallocate resources. That presents a thorny problem: Under what circumstances should we give up a standard? At what point does it make sense to discard the resources invested in methods of older knowledge and acquire the new ones? We face a standardization/innovation tradeoff, an ever-present process of adjustment to new economic realities that saturates market economies.

We're all familiar with this tradeoff from personal experience. Consider, for example, the last time you bought a car. Suppose that the latest copy of

One of the most disturbing aspects of the Microsoft case is the DOJ's preference for emphasizing hypothetical markets over actual ones.

Car and Driver arrives in your mail with a profile on next year's version of the car you just bought. It gets rave reviews: tests indicate it gets 10 percent more miles per gallon, accelerates faster and costs the same. Should you buy it?

Most of us wouldn't, because the resources we invest in our cars are significant, greater than the benefits we'd get from buying cars made with newer features. Most people do not have the resources available to buy the newest car every year, even if it's technologically superior. On the other hand, we may upgrade our computers more often, both because they represent a less significant investment of resources, and because the computer industry generates new knowledge rapidly and makes it available cheaply.¹

Attempts by firms to address the standardization/innovation tradeoff are necessary to promote consumer welfare — but may still be interpreted under traditional antitrust theory as restraining trade.

Standards shift and new products take hold when the benefits of moving to the new outweigh the costs of discarding the old. Profit-making firms can attempt to influence when and where these shifts occur by maximizing the benefits of their proposed innovations (increased ease of use, greater functionality, lower cost) or by minimizing the costs of their adoption (by offering compatibility with existing standards). Some firms even try both approaches. Microsoft, for example, consistently adds features to Windows while providing support for applications that use DOS (its much older command-line-based operating system developed in the early days of personal computing, famous for its "c:\>" prompt.) Intel's latest chips include extremely sophisticated features for improved performance, but have always offered full compatibility with their original design of 20 years ago.²

Recognition of the standardization/innovation tradeoff is essential to analyzing the economics of the computer industry. Unfortunately, appreciation of the tradeoff appears to be lacking in both the public statements and the legal documents on file in the Microsoft case.

THE INTERNET, THE WORLD-WIDE WEB AND BROWSERS

Since the early 1960s, computer scientists have investigated various methods for connecting computers together in networks. The advantages of networking include sharing information, sharing resources and improved efficiency. Over the past two decades, standards have evolved allowing computers to connect to one another easily and reliably. These standards are the Internet Protocols, and include telnet, TCP/IP, ftp, and a series of protocols for delivery of electronic mail. Computers that use these standards connect to the Internet.

¹ For a more formal treatment of these issues, see Farrell and Soloner: "Installed Base and Compatibility: Innovation, Product Preannouncements, and Predation," *American Economic Review* 76: pp. 940-55, 1986.

² Carole Dulong: "The IA-64 Architecture at Work," *IEEE Computer*, July 1998, pp. 24-32.

In 1988, a scientist named Tim Berners-Lee first proposed a general way of organizing information that made the Internet much easier to use. By hiding the arcane commands and protocols of the Internet from users, exchanging information on the Internet became possible for millions of people.

The portion of the Internet that now uses these standards is the World-Wide Web, or WWW. An application program that uses these standards to search the WWW for information and present it to the user is a browser. The first browsers were text-based, like Lynx. The first popular browser capable of displaying graphics was written by Marc Andreessen, a graduate student in computer science at the University of Illinois. He went on to co-found Netscape Corporation (acquired by America Online last November for \$4.2 billion).

Shortly after the explosion of the World-Wide Web, a group of programmers at Sun Microsystems began to work on a way to write application programs that could execute regardless of the particular operating system the user happened to be running. This would mean that the same program could execute on any computer. Sun's engineers developed the Java programming language. The developers of Java negotiated arrangements with Netscape to support Java within Netscape's browser. This meant that any computer that could access the Web and run Netscape's browser could run programs written in Java, regardless of what kind of computer it was or what operating system it had.

Innovations like Java hold the potential to make OS-dependent desktop computing obsolete. Microsoft, reacting to the undeniable popularity of the WWW and Netscape's browser, recognized that the benefits of making available new Internet technologies might now outweigh the costs of re-routing investment in existing standards centered on the company's traditional desktop computing model. Microsoft CEO Bill Gates responded by redefining Microsoft as an "Internet company," not just a software company. Microsoft embraced the WWW, Java and the Internet protocols as new standards, incorporating them into existing products. They developed a browser to compete with Netscape's called Internet Explorer (IE) and integrated it with the Windows operating system. Like every company threatened with a new standard, Microsoft sought to maximize the benefits of adopting new technologies while minimizing the costs of doing so. Specifically, the company sought to: (a) acknowledge and embrace the WWW as the inevitable development that it clearly was and is, and (b) minimize the costs of switching between its familiar desktop user environment and the less-familiar Web by offering full compatibility, including "look and feel," with Windows.

When Internet Explorer (IE) was first developed, Microsoft required all PC vendors to put the IE icon on the desktop and take other steps that favored IE, as a condition for pre-installing the Microsoft Windows operating system.

An appreciation of the tradeoff between standardization and innovation appears to be lacking in both the public statements and the legal documents on file in the Microsoft case.

The DOJ believed this violated a previously obtained consent decree and filed an antitrust complaint. The legal minutiae of this decree hinged on whether the browser is a “separate product” from its operating system. A lower court ruled in the DOJ’s favor, only to have that decision overturned on appeal six months later. The DOJ consequently changed strategies, and now accuses Microsoft of using its market power to “bully” its competitors.

In any case, our interest is not in the particular “angels and pinheads” question of whether a piece of software is one product or two, or in refuting the latest legal theory that the DOJ is using to bolster its case. We are concerned with the overall merits of the DOJ complaint, and the rationality of applying century-old antitrust law to the computer industry given the standardization/innovation tradeoff, and given Microsoft’s benign behavior toward consumers even as its supposed monopoly grew.

In the absence of dynamic marketplace negotiations, there is no rational reason to prefer an operating system without a browser as the DOJ complaint does.

THE DOJ COMPLAINT AND PUBLIC STATEMENTS

The civil action of *United States of America v. Microsoft Corporation* was filed on May 18, 1998. (A browser-readable version is available on the Web at the DOJ’s Web site, at <http://www.usdoj.gov/atr/cases/f1700/1763.htm>. Unless otherwise stated, all citations in this section are from that document.)

DOJ’s argument, while elaborate, runs essentially as follows:

- 1) Microsoft has a monopoly in the PC operating system market. This monopoly is protected by technological “lock-in.”
- 2) The emergence of the Internet, WWW standards and Java are seen by Microsoft as a threat to that monopoly.
- 3) Microsoft’s actions in response to this threat (such as its promotion of Internet Explorer through bundling with the Windows operating system) are illegal violations of sections 1 and 2 of the Sherman Act of 1890. They are also anticompetitive and detrimental to consumer welfare.
- 4) Preventing Microsoft from engaging in these practices will promote innovation and competition in the browser market. This will enhance consumer welfare.

This argument is fundamentally flawed.

MONOPOLY AND NETWORK EFFECTS

Microsoft has the largest share of the PC operating system market, generally estimated between 80 and 90 percent. As noted, however, operating systems provide the crucial consumer benefit of standardization. A

smaller market share for Microsoft and more operating systems in the marketplace, while perhaps mimicking textbook notions of “competition” more closely, would impose tremendous costs on consumers. Where standardization is crucial, it doesn’t make sense to talk about the importance of consumer welfare while at the same time citing the dangers of a large market share. It is precisely that large market share that enhances consumer welfare, given that consumers’ welfare includes the value of their time and effort.

Relatedly, the DOJ’s complaint alleges that Microsoft’s “monopoly” is protected by “network effects.” Network effects occur when a person’s benefit from using a product increases with the number of people who use it. Network effects are in fact socially beneficial, as they play a leading role in making technology affordable for ordinary consumers. Problems arise, so the DOJ claims, when network effects cause “lock-in” of an inferior technology, in which a weaker product (presumably the Windows operating system) can outsell a stronger one if its installed base of users is large enough. Despite widespread popular belief in the lock-in theory, the existence of locked-in, inferior products has little empirical support.³

A declaration filed in support of the DOJ notes correctly that “application software written for a specific operating system cannot run on a different operating system without extensive and costly modifications or add-ons,” and that “Network effects have increased the desirability of Microsoft Windows [95 and 98] for consumers. Once enough users had been attracted to Windows that very fact made Windows even more desirable to further users.”⁴ The complaint then claims that the number of software applications that must run on an operating system constitutes a significant barrier to entry that leads to potential for the abuse of monopoly power by Microsoft, and therefore legal action is justified.

This claim is contradictory to the DOJ’s stated objectives of consumer welfare, because these very “barriers to entry” – the widely available applications — are what make Windows so attractive to consumers in the first place. It is precisely the large number of applications programs available under Windows and the standardization Windows provides that motivate consumers to purchase the Windows operating system. It is nonsense to recognize the benefits of standardization for consumers and then cite them as harmful “barriers to entry.”

A smaller market share for Microsoft and more operating systems in the marketplace, would impose tremendous costs on consumers.

Once consumers are “locked in” to Windows, a monopolistic Microsoft should raise its application prices through the roof. In fact, it has done no such thing.

³ S.J. Liebowitz and Margolis, S.E: “Path Dependence, Lock-In, and History,” *Journal of Law, Economics and Organization* 11(1995): pp. 205-26.

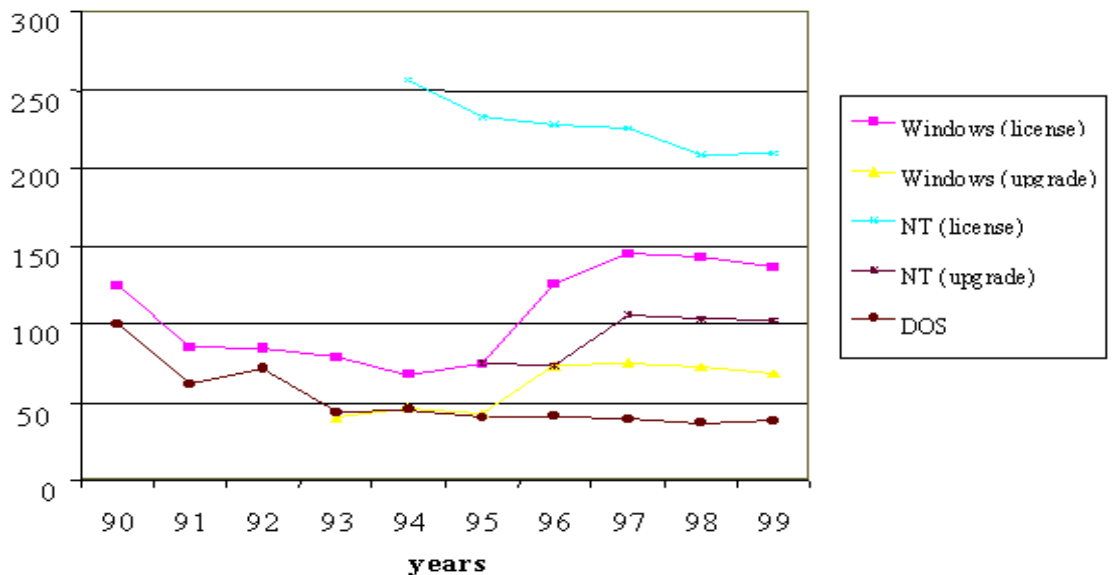
⁴ Franklin Fisher, Declaration of Prof. Franklin M. Fisher in support of plaintiff in *United States v Microsoft*, available online at <http://www.usdoj.gov/atr/cases/f1700/1766.htm>.

THE COMPETITIVE THREAT TO MICROSOFT AND THE HISTORICAL RECORD

The documents on file in *United States v Microsoft* contain numerous admissions that market processes are working. Sections I.6 through I.10 of the complaint state very clearly that the combination of Web-based standards and Java, developed by Microsoft's competitors, poses a significant threat to Microsoft's domination of the PC operating system market. Entrepreneurs at Netscape and Sun have generated new products, with benefits that very well may outweigh the costs of discarding existing computing standards — even one popular as Windows.

If Microsoft were truly an unassailable monopoly, then it wouldn't care about its competitors and the arrival of new standards. It wouldn't need to respond to the market, it wouldn't need to innovate, it would restrict output and it would raise the prices of its products. As the complaint itself admits, Microsoft has done just the opposite. Instead of ignoring the threat from Netscape, Microsoft developed a competing browser, and by the government's own admission "spent hundreds of millions of dollars to develop, test and promote [it]."⁵ Instead of acting like a monopolist that ignored consumers' wishes and throttled innovation, Microsoft "released three subsequent versions [of IE] (2.0, 3.0, 4.0), in each case adding features and functionality to the product."⁶ Instead of pricing like a monopolist, Microsoft gives its browser away free.

Figure 1
Microsoft OS Prices
As Advertised in *PC Magazine*
(1990 dollars)



⁵ *United States v Microsoft Corp.*, (No. 98-1232)(D.D.C. filed May 18, 1998), at Page 16.

⁶ *op cit*, 62.

Nor does the record show evidence of monopolistic behavior in operating system licensing. During the trial, Microsoft sought to protect its Windows pricing data for PC vendors from public disclosure, citing existing confidentiality agreements.⁷ Fortunately, a wealth of data on Microsoft consumer prices is already publicly available, and can be found in any good college library.

To examine the question of Microsoft pricing behavior, the author went back through 10 years of *PC Magazine* and sampled the price of Microsoft operating systems (DOS, Windows 3.1, Windows 95, Windows 98 and Windows NT). The results are shown in Figure 1, with prices reported in constant 1990 dollars:⁸

Up until 1995, Windows and DOS licenses declined in price even as functionality improved. With the release of Windows 95, Microsoft offered users two choices: an original license for new users or an upgrade path for existing Windows users. The initial price of a Windows 95 license at \$125 (here shown starting in 1996) was 69 percent more than that of a 1995 Windows 3.1 license at \$74. This reflected at least in part the dramatic differences in functionality between the two products. The cost of an upgrade in 1996 to Windows 95, however, was only \$73 in constant dollars, essentially the cost of a 1995 Windows 3.1 license despite the fact that Windows 95 was a significantly more powerful product.

If we are to give the DOJ the most charitable interpretation possible, we would observe that between 1996 and 1999, the cost of a Windows 95 single license has risen 9.6 percent in constant dollars. Statistically significant, perhaps, but hardly evidence of monopoly power. On the other hand, the cost of a Windows upgrade remained essentially constant during the 1996-99 time period, dropping from \$73 to \$68. Upgrade paths for all Windows OS products, in fact, have consistently declined in price. This is the opposite of the monopolistic pricing that we should see if “lock in” has occurred. Once Microsoft has presumably captured users with its Windows OS, as a monopoly it should be able to restrict output and raise prices for Windows users. In fact, the historical record shows it does nothing of the kind.

Taking a longer-range view and looking at the past 10 years, the cost of a new Windows license increased by 9.6 percent, from \$125 in 1990 to \$137 in 1999 in constant dollars. This appears rather minor, given that over these 10 years, Microsoft changed Windows so as to support hundreds more peripheral devices, repair numerous bugs reported by users, connect to the Internet, use a significantly larger help database, and provide more “wizards” to assist users in system configuration. In general, Windows became a

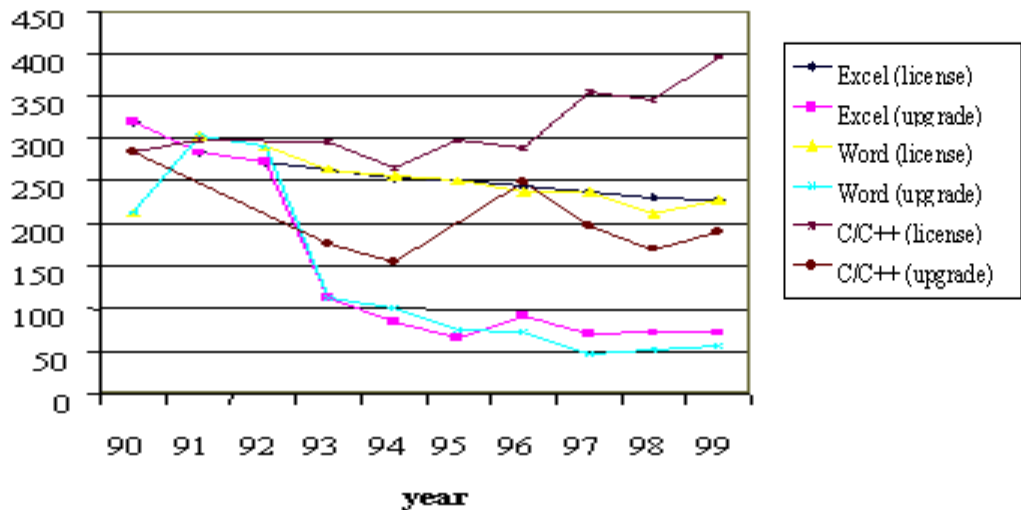
Upgrade paths for Windows OS products have consistently declined in price.

Microsoft's pricing behavior does not support the DOJ's claim of monopoly.

⁷ See <http://www.computerworld.com/home/news.nsf/all/9901053price>, Patrick Thibodeau “Microsoft Seeks to Cloak Windows Pricing,” Jan. 5, 1999.

⁸ CPI data obtained from Bureau of Labor Statistics, <ftp://ftp.bls.gov/pub/special.requests/cpi.cpiiai.txt>.

Figure 2
Microsoft Application Prices
As Advertised in *PC Magazine*
(1990 dollars)



significantly more advanced, more powerful product, consuming millions of dollars of Microsoft's research and development capital.

Also over the past 10 years, the cost to consumers of obtaining the latest Windows upgrade has declined in constant dollars. For the prices obtained by the author, the cost to consumers of upgrading to the newest version of Windows has declined by 46 percent. As Figure 1 shows, in 1990, the cost to get Windows was \$125; but upgrading in 1999 to the newest version is \$68 in constant 1990 dollars. Again, this dramatic decline over 10 years has occurred while Microsoft has added significant functionality with each upgrade. Microsoft's incorporation of Internet functionality into its latest Windows releases is entirely consistent with this trend.

It is precisely that large market share that enhances consumer welfare.

Nor is this picture of falling prices confined to operating systems. In addition to examining operating systems, the author looked at prices for Excel, Word, and the current state of the art C/C++ program development environment. These results are shown in Figure 2.

Patterns similar to those of Figure 1 emerge. Prior to the release of Windows 95, costs of applications to consumers typically remained constant or declined. With the release of Windows 95, a path ensued by which consumer costs fell well below what they had been under Windows 3.1. For the spreadsheet application Excel, prices for licenses declined in 1990 dollars between 1995 (just prior to Windows 95) and 1999, from \$251 to \$228. Upgrades increased a bit, from \$67 to \$72. A license for Word, the word processing application, also fell from \$251 to \$228, while Word upgrade prices declined dramatically, from \$74 to \$57. Of the three applications

examined, only the price of a state of the art C/C++ development license has increased significantly. This is largely because these are lower-volume products than Word and Excel (there are far fewer C++ developers than users of word processors and spreadsheets) combined with the increasing complexity and power of modern code development environments.

Figure 3
Microsoft Software Price History
(1990 dollars)

<u>Product</u>	<u>1990 price</u>	<u>1995 price</u>	<u>1999 price</u>	<u>% change, 1990-99</u>
Excel	\$320	\$251	\$228	-29%
Excel upgrade	\$320	\$ 67	\$ 72	-77%
Word	\$213	\$251	\$228	+7%
Word upgrade	\$213	\$ 74	\$ 57	-73%
Windows	\$125	\$ 74	\$137	+9.6%
Windows upgrade	\$125*	\$ 43	\$ 68	-46%

*Upgrade not yet available

Surveying the past 10 years (see Figure 3, which provides an overview of selected years' prices), the cost of some Microsoft applications' licenses have declined in constant dollars, and for others it has increased slightly. For the applications and prices obtained by the author, Word has increased by 7%, from \$213 to \$228. Excel has declined by 29%, from \$320 to \$228. A state of the art C/C++ development environment has increased by 39%, from \$285 to \$396. Similar to the functionality of operating systems, Microsoft application functionality has increased during this time. In fact, one could argue that the newest versions are so different, particularly for development environments, that each release is a dramatically different product. In each case, however, the functionality added is significantly greater than the observed price increase.

On the other hand, costs of upgrading these common applications declined dramatically between 1990 and 1999: 73 percent for Word (from \$213 to \$57) and 77 percent (\$320 to \$72) for Excel (both in 1990 dollars).

Again, this pricing behavior doesn't support the DOJ's claim of monopoly. Once consumers are "locked in" to Windows, a monopolistic Microsoft should raise its application prices through the roof. In fact, it has done no such thing. There is no evidence of monopoly behavior: restricted output and increased consumer cost. The historical record shows consistently improved functionality at lower cost, exactly what classical economic theory

It is nonsense to recognize the benefits of standardization for consumers and then cite them as harmful "barriers to entry."

would predict for a productive, successful company that remains vigilant against losing ground to competitors.

MICROSOFT'S RESPONSE TO COMPETITION, AND THE SHERMAN ACT'S RESPONSE TO MICROSOFT

Microsoft's response to the threat from Netscape and Java is the key issue in the government's case. The government's concern was Microsoft's requiring favorable treatment of Internet Explorer as a condition for manufacturers to pre-install Windows on their machines. Microsoft also negotiated exclusive Explorer promotion arrangements with Internet Service Providers and Internet Content Providers (ISPs and ICPs). Although Microsoft has since agreed under DOJ pressure not to pursue these kinds of arrangements, they sheds a great deal of light on the role of antitrust in high-tech industries.

*Legal action
against Microsoft
would be
contradictory to
the DOJ's stated
objectives of
consumer
welfare.*

Microsoft's arrangements required ISPs and ICPs to provide preferential treatment to IE in exchange for appearing in Windows' Internet connection screen. Preferential treatment might include stating that IE is the preferred browser, removing links to competing browsers from their main sites and so forth. The DOJ alleged that these practices were anticompetitive, and were illegal violations of sections 1 and 2 of the Sherman Act.

The Sherman Antitrust Act of 1890 forbids contracts "in restraint of trade." Enacted in response to perceived concerns about the economic power of corporations, it is the primary legal weapon in the antitrust arsenal. Given the failure of 19th century policymakers to appreciate the extent to which antitrust served the private interests of competitors of successful businesses rather than the public interest⁹ (a failure that still persists) and given the extraordinary difficulties in distinguishing "restraint of trade" from ordinary competition and contractual arrangements, it should surprise no one that attempts to apply the Sherman Act 100 years later to high technology leads to problems.

In the case of computer technology and other network industries, attempts by firms to address the standardization/innovation tradeoff are necessary to promote consumer welfare — but may still be interpreted under traditional antitrust theory as restraining trade. For example, Microsoft's negotiated tie-in arrangements, undoubtedly self-interested, are nonetheless the predictable and socially beneficial acts of a profit-making firm seeking to persuade consumers to adapt to the new Internet standards by minimizing their transition costs. After all, consumers may not care which browser they use.

⁹ In fact, a strong argument can be made that the Sherman Act had its origins in the desire to serve private interests, not public ones. See for example DiLorenzo: "The Origins of Antitrust: An Interest-Group Perspective," *International Review of Law and Economics* 28(1985): pp. 247-65.

Consumers do want to use their time wisely. It may be that the most valuable use of consumer time is a simple, easy-to-use pre-installed operating system with simple, fast Internet connection startup screens. Or perhaps entrepreneurs will decide that Microsoft's pre-installed vision of computing is not meeting consumer needs. If so, they will provide value by installing less restrictive operating systems on computers and sell them on the open market. Or it may be that producers and consumers of software will embrace Java and abandon Windows altogether. We simply don't know. More importantly, nor does the DOJ.

But in the absence of dynamic marketplace negotiations, there is no rational reason to prefer one specific outcome over another (for example, an operating system without a browser) as the DOJ complaint does. The DOJ's stated goal of "improved competition in the browser market,"¹⁰ for example, simply treats a particular point in the standardization/innovation tradeoff as most desirable and seeks to impose it. In fact, the suggestion that more favorable access to the desktop for Netscape is both desirable and requires legal intervention now appears ridiculous in light of America Online's multi-billion dollar buyout of the company.

Given the rapid generation of new knowledge by computer scientists and entrepreneurs, there may not be a browser market five years from now. Perhaps consumers will prefer the WWW and their desktop integrated into a single, easy-to-use computing environment, and won't like having to use a separate browser program to search the Web. Or perhaps developments like hand-held computers will make today's PC operating systems obsolete or less important. We simply don't know. Given what we do know about computing and innovation, however, a fixation on the browser market seems short-sighted. It is doubtful, for example, if consumer welfare would have been enhanced by government intervention in the market for washboards and ditto machines.

WHAT MICROSOFT "MIGHT" DO

One of the most disturbing aspects of the Microsoft case is the DOJ's preference for emphasizing hypothetical markets over actual ones. The DOJ does not base its case on consumer harm caused by Microsoft, because there is none: Microsoft has consistently offered better products at lower prices. Instead, the case documents recommend preemptive action based on Microsoft's potential to monopolize and cause harm.^{11,12}

¹⁰ *United States v Microsoft*, Memorandum of the United States in Support of Motion for Preliminary Injunction, pg 43, available online at <http://www.usdoj.gov/atr/cases/f1700/1762.jt.>

¹¹ Sibley, David: Declaration of Prof. David S. Sibley in support of plaintiff in *United States v Microsoft*, available online at <http://www.usdoj.gov/atr/cases/f1700/1763.htm>.

¹² Fisher, *op cit*.

The documents on file in United States v. Microsoft contain numerous admissions that market processes are working.

It may be that producers and consumers of software will embrace Java and abandon Windows altogether. We simply don't know, nor does the DOJ.

If Microsoft were truly an unassailable monopoly, then it wouldn't care about its competitors.

For example, the government argues:

“Microsoft *could* raise the price of its operating system . . .”

“There is a *substantial probability* that these anti-competitive actions will permit . . .”

“Microsoft is *likely* to recover its lost profits . . .”

“. . . the Microsoft browser *may well become* the bottleneck input . . .”

“. . . are *likely to enable* Microsoft to monopolize . . .”

“Microsoft *could* obtain an additional benefit if these restrictions . . .”

“At that point, Microsoft *can* raise the price of its OS . . .”

“Microsoft *will likely* recoup whatever profits it has foregone . . .”

“This *could potentially have* significant adverse consequences . . .”

“Microsoft’s actions are *likely* . . .”

Even the government’s own key economic expert, Franklin Fisher, admitted that Microsoft has yet to cause actual harm.¹³

It’s difficult to make a case at all for consumer harm. On the one hand, even if Microsoft did everything it stands accused of, its actions still haven’t shielded it from competition. The popular Be operating system is available for PCs at around \$70¹⁴ and has hundreds of common applications written for it. Dell, SGI, IMB and Hewlett-Packard have all committed to support Linux, another alternative OS with a supported version available for only \$50.¹⁵ Microsoft has been unable to gain significant market share as an Internet portal as well. The list of competitive threats goes on and on.

Indeed, there are deep, troubling issues raised by the DOJ’s tendency to automatically regard what Microsoft “might” do as inevitably harmful to consumers. It might be just as “possible,” “likely” and “substantially probable” that Microsoft’s actions will continue to successfully anticipate consumer preferences in the marketplace, and continue to offer better products for less money just as they have done in the past. None of us is omniscient: We just don’t know. We do know that punishing people solely on the basis of what they *might* do, ought to offend anyone who values reason and the rule of law.

CONCLUSIONS

The policy question this paper considers is a simple one: Does antitrust intervention do more harm than good to high technology sectors and to consumers? The Microsoft trial provides evidence that it does.

¹³ Jonathan Rauch, “Microsoft Trail Dispatches,” *Slate*, Jan. 13, 1999.

¹⁴ See <http://www.be.com>. We note that the BeOS development team chose to integrate their operating system very tightly with Internet services, exactly the same approach for which Microsoft is now on trial.

¹⁵ See <http://www.redhat.com>, the Web site for Red Hat Software.

It is wrong to assume that the millions of consumers who have bought Windows 3.1, Windows 95 and now Windows 98, bundled with Internet Explorer, were not made better off by those purchases. The failure of elected and appointed officials to recognize and respect those judgments does more harm than good.

It is wrong to substitute the judgments of a few economists, antitrust attorneys and judges on what constitutes consumer welfare for the consensual transactions of consumers themselves. This does more harm than good.

It is wrong to deny that a standardization/innovation tradeoff exists, or to presume to know beforehand how that tradeoff should be made. Pretending such knowledge and enforcing it through law does more harm than good.

It is wrong to ban attempts to “restrain trade” in the computing industry, since the very real and socially important objective of minimizing the costs of adopting new standards can best be achieved by one company trying to convince consumers not to trade with another. Such cost minimization practices can include aggressive price cutting, licensing restrictions and massive innovation, practices that Microsoft is now on trial for. Punishing companies who minimize the social costs of adopting standards does more harm than good.

Before he was chairman of the Federal Reserve Board, Alan Greenspan offered his opinion on antitrust law, calling the statutes “a jumble of economic irrationality and ignorance.”¹⁶ Thirty years later, events have proven him right.

The case of *United States of America v Microsoft* may be front-page news. It may make interesting reading, it may be politically inevitable and it may even enjoy modest support in some circles.

But that doesn't make it right. The government's proper role is to ensure that Microsoft (or any other company) honors its contractual agreements with customers and shareholders. Going beyond that responsibility and *interfering* in the voluntary actions of consumers is bad economics, bad law and bad policy. Supporters of freedom, reason, and entrepreneurship should urge the DOJ to drop this ill-considered action as an affront to rational thinking. Markets may not be perfect, but they're better than this.

Network effects and standardization are in fact socially beneficial, as they play the leading role in making technology affordable for ordinary consumers.

¹⁶ Ayn Rand, *Capitalism: The Unknown Ideal* (New York: The New American Library, 1967), p. 70.

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