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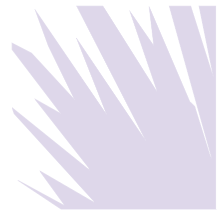

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LESSONS FROM *MICROSOFT*

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INTRODUCTION**

On May 18, 1998, the U.S. Department of Justice ("DOJ") and 20 states sued Microsoft under federal and state antitrust laws, setting the stage for a legal confrontation that will establish important competitive rules of engagement in a key area of the economy for years to come. The goal of these materials is to provide the interested and antitrust-literate reader a more substantive understanding of the claims, evidence, and rulings in the case than is generally available in the popular press and without the burden of going through a truly massive record. The discussion will focus primarily on the Department of Justice complaint, which differs from the state complaints substantively only in the omission of a "monopoly leveraging" claim that has since been dismissed by the District Court on summary judgment.

On November 5, 1999, the District Court issued its amended Findings of Fact, in which it found that Microsoft had monopoly power and had engaged in certain conduct designed to protect that power. 84 F. Supp.2d 9 (D.D.C. 1999). On January 18, 2000, after settlement talks failed, the Court issued its Conclusions of Law, in which it found, predictably, that Microsoft's actions violated the antitrust laws. 87 F. Supp.2d 30 (D.D.C. 2000). Finally, on June 7, 2000, the Court issued its Final Judgment which imposed various injunctive provisions and, most dramatically, ordered divestiture, splitting Microsoft into two companies, one with the Windows operating system and the other with the applications, including the Internet Explorer browser. 97 F. Supp.2d 59 (D.D.C. 2000). The case is now on appeal to the United States Court of Appeal for the District of Columbia, the Supreme Court having recently denied an expedited appeal directly to that Court.[1]

The core claim of the Government is that Microsoft has used and abused its monopoly power over Intel compatible PC operating systems to gain control of the Internet browser market, an argument that is potentially applicable to a wide variety of software products that depend on the operating system. What is different and important about browsers, according to the complaint, is that Microsoft viewed them as a threat to its dominance in operating systems. At face value, the Microsoft documents, particularly a large number of e-mails, appear to support this theory.

Although Microsoft denies having monopoly power as required under the first element of a Section 2 monopolization claim, the critical issue in the case is likely to be whether Microsoft has engaged in exclusionary conduct satisfying the second element of the claim. It is not sufficient that one possesses monopoly power; to be liable, one must have obtained or maintained it by "exclusionary" actions, as opposed to innovation, luck or other innocent behavior. On this issue, the law is surprisingly ambiguous, giving ammunition to both the DOJ and to Microsoft.

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* I appreciate the assistance of Jim Kuntz and Josh Imhoff.

** Comprehensive materials including opinions and orders, briefs, transcripts, and exhibits are available on the Internet at Microsoft's website, <www.microsoft.com/presspass/legalnews.asp>, and at the Justice Department website, <www.usdoj.gov/atr>.

The Government relies on a line of monopolization cases holding that liability may be based on conduct that would not be illegal if done by a company in a competitive market. These cases impose a significantly tougher standard of conduct on a monopolist precisely because it possesses extraordinary power. The analysis under the "rule of reason" standard of Section 1 of the Sherman Act is similar in that practices by a company in a competitive market may be found reasonable while the same practice by a company with market power may be found unreasonable. Microsoft relies on cases holding that practices for which there is a legitimate business reason are not "exclusionary" and that even monopolists should be allowed, even encouraged, to compete aggressively so long as they do not engage in predatory conduct. Microsoft also relies on what it considers to be unique features of the software business that, in its view, require a different approach to antitrust analysis.

The most difficult situation involves practices that have legitimate business purposes but also hurt competition. The result may well depend on a balancing of the importance of the purpose, the availability of alternative methods of achieving it, and the extent to which competition is harmed. The analysis may be significantly different for the two different categories of conduct challenged in the complaint: first, arguably exclusionary contracts with other companies in the computer and Internet business and, second, the physical integration of Microsoft's browser into the software code for the Windows operating system.

In the last 20 years, courts have become much more willing to recognize legitimate business reasons for exclusive arrangements, particularly with suppliers or customers, and Microsoft no doubt will identify legitimate purposes for its contracts. Nonetheless, if the appellate court believes that the contracts significantly impair the ability of Microsoft's competitors to sell their products, it probably will not have much reluctance in affirming the District Court.

Microsoft will be able to marshal strong arguments about the antitrust relevance of genuine integration. The Government is publicly committed to the proposition that the goal of the antitrust laws is consumer welfare. In its Merger Guidelines, for example, the Antitrust Division acknowledges that efficiencies may justify an otherwise anti-competitive merger, because of the potential of improving consumer welfare. Microsoft has cast the issue in the case as its freedom to innovate, which can be seen as a particular kind of efficiency consideration. As discussed below, Microsoft already has one appellate court decision in its favor on a central issue in the case.

THE 1994 COMPLAINT AND CONSENT DECREE AND SUBSEQUENT LITIGATION

To understand the present lawsuit, one must understand the earlier case that ended with a consent decree. After taking over an investigation begun by the FTC in 1990, the Antitrust Division, in conjunction with European antitrust authorities, negotiated a consent decree with Microsoft. The complaint and the consent decree were filed on July 15, 1994, during the tenure of Assistant Attorney General Ann Bingaman. The controversy surrounding the consent decree ultimately led to further litigation that may profoundly influence the present case.

Under the Tunney Act, government consent decrees must be approved by the court as being in the public interest. On February 14, 1995, District Judge Stanley Sporkin refused to approve the proposed decree. Judge Sporkin held that he was entitled to consider more than the four corners of the complaint in determining whether the decree was adequate. The Government refused to provide Judge Sporkin with any information about

the scope of its investigation or findings beyond that set forth in the complaint and proposed decree. His concern was that the complaint and decree did not address a number of alleged anti-competitive practices by Microsoft, particularly the use of "vaporware," the making of false announcements of imminent new product releases to discourage the industry from adopting products of competitors. Judge Sporkin was not convinced that the decree was sufficient to restore competition.

On June 16, 1995, the D.C. Circuit reversed Judge Sporkin, holding that he had overstepped his authority because the Tunney Act did not give the district court the authority to look behind the decree and evaluate the sufficiency of the Government's investigation. Following remand, the consent decree was finally entered on August 21, 1995.

On October 20, 1997, the Government petitioned the District Court to hold that Microsoft had violated the consent decree and enter an order of contempt based on Microsoft's requirement that computer manufacturers license and distribute Microsoft's Internet Explorer browser as a condition for obtaining a license for the Windows 95 operating system. The language of consent decree and the complaint on which it was based were obviously critical to this change. In the complaint filed with the consent decree, the Government had alleged as follows:

- Microsoft had a monopoly over operating systems for personal computers using microprocessors manufactured by Intel.
- There are high barriers to entry into the market for operating systems because of the time and expense to develop a system, the absence of applications to run on new systems, the lack of an installed base of users, and the difficulty of persuading computer manufacturers to promote a non-Microsoft system, particularly with a small base of users.
- Because of Microsoft's monopoly position, computer manufacturers believed that they had to offer its operating system, and Microsoft had abused that dependence by requiring exclusionary conditions that hindered competitors.
- Microsoft required "per processor" payments regardless of whether the Microsoft operating system was included in a computer. This practice amounted to a "tax" on the use of other systems and a "double royalty," discouraging the use of other operating systems by computer manufacturers.
- Microsoft used long-term contracts that magnified the exclusionary effect of the other requirements.
- Microsoft imposed unnecessarily restrictive non-disclosure requirements on application developers that precluded them from working with competitors.
- Significantly, there was no mention of unlawful bundling in general or of Internet browsers in particular.

Not surprisingly, the consent decree tracked the general concerns of the complaint. It was conduct-oriented, covering the following points:

- License agreements could only be one year in duration with a possible one-year extension.

- Microsoft could not require any restrictions on the use of non-Microsoft products.
- Per processor license payments were prohibited, and detailed restrictions were imposed on "per system" terms.
- Microsoft could not use any "lump sum" license terms.
- Only specifically defined non-disclosure provisions could be used in giving access to test or "beta" versions of Microsoft products.
- For purposes of the subsequent litigation, the critical term was Item E which stated as follows: "Microsoft shall not enter into any License Agreement in which the terms of that agreement are expressly or impliedly conditioned upon: (1) the licensing of any other Covered Product, Operating System Software product or other product (*provided, however, that this provision in and of itself shall not be construed to prohibit Microsoft from developing integrated products*)...." (Emphasis added.)

On December 11, 1997, the District Court (now Judge Jackson), held that the Item E on which the Government relied was ambiguous, and therefore could not form the basis for a finding of contempt. 980 F. Supp. 537, 541 (D.D.C. 1997). The Court did, however, find that it was sufficient to support a preliminary injunction against Microsoft's bundling of its operating system and browser.

Microsoft appealed the preliminary injunction. In a split decision, the panel of the D.C. Circuit held that the preliminary injunction was improper on the procedural ground that the District Court had not given Microsoft sufficient notice that it would consider a preliminary injunction, as opposed to the petition for contempt. 147 F.3d 935, 956 (D.C. Cir. 1998). The difference was important because a preliminary injunction involves equitable considerations not present in a motion for contempt. Although not necessary to its decision, the Court then reached out to address the issue of the likelihood of the Government prevailing on the issue of whether the challenged bundling violated the consent decree.

While the court noted that the consent decree was essentially contractual in nature, it held that the disputed language should be interpreted in light of antitrust principles. This blending of contractual exegesis and antitrust policy may blunt somewhat the later effect of the decision, but it is clear that the majority preferred an antitrust analysis that would have great impact not only on the present case but on antitrust cases involving software generally.

The Court explained that the provision on which the Government relied had originated with the antitrust authorities of the European Union which were reacting to a complaint by Novell that Microsoft had contractually tied its MS-DOS (pre-Windows) operating system to the graphical user interface provided by Windows 3.11, which in effect "sat on top" of the DOS operating system. Novell had a competing DOS system. At the same time, the Court found that the consent decree assumed that Windows 95, which effected an integration of DOS and the graphical user interface of Windows, was permissible. The Court's analysis was driven by the need to interpret Item E in such a way as to conform simultaneously to both of these conditions. The Court's interpretation of the history, language, and structure consent decree is highly detailed and has no lasting importance. What is potentially important is the Court's discussion of the background antitrust principles which also guided its interpretation of the "integration proviso."

The Court held that prior courts had defined a very narrow and deferential standard for reviewing challenges to claims of "technological tying" where arguably separate products are combined, not by contractual requirements but rather by building them together. The Court held that an integration would not be "genuine" if products were merely "bolted together," but it was not willing to go far beyond that point: "The question is not whether the integration is a net plus but *merely whether there is a plausible claim that it brings some advantage*." (Emphasis added.) Applying this standard to the admittedly incomplete record before it, the Court stated that it was "inclined to conclude that the [operating system and browser] package is a genuine integration; consequently Section IV(e)(I) [of the consent decree] does not bar Microsoft from offering it as one product."

Judge Wald dissented from the majority's statement of antitrust policy, which she believed was far too deferential. She would have interpreted the "integration proviso," and antitrust law generally, to require a balancing standard under which "Microsoft may offer an 'integrated' product to OEMs under one license only if the integrated product achieves synergies great enough to justify Microsoft's extension of its monopoly to an otherwise distinct market."

By trying to apply the consent decree to a practice that it clearly did not contemplate and in the face of an "integration proviso" that was on its face unlimited, the Government obtained an appellate court decision that may haunt its full-blooded monopolization case. The D.C. Circuit defined a standard that, as Judge Wald noted in dissent, can virtually always be met.

THE 1998 GOVERNMENT COMPLAINT

Rather than continuing the fight over the consent decree, the Department of Justice filed a new complaint on May 18, 1998 which initiated the now current case. The complaint includes but is not limited to the facts that were the basis of the failed contempt action:

- Microsoft has a monopoly over the market for operating systems for Intel-compatible personal computers.
- One of the significant barriers to entry to the operating systems market is the fact that a very large number of applications are written for Windows, the so-called "applications barrier."
- Microsoft correctly perceived that its monopoly was threatened by the Netscape browser for two reasons:
    - First, the browser could become a "platform" to which applications could be written without regard to the underlying operating system, thus lowering the applications barrier to entry.
    - Second, the browser was a significant point of distribution for Java, a computer language designed to be run on any computer, regardless of operating system, and which therefore constituted an additional threat to Microsoft.
- Therefore, Microsoft embarked on a deliberate scheme to eliminate the browser threat by developing its own browser, Internet Explorer, and taking various anti-competitive actions to ensure its success and Netscape's failure. The conduct challenged by the Government includes:

- Meeting with Netscape in May 1995 and proposing a division of the browser market between the two companies. When that proposal was rejected by Netscape, Microsoft then set out to defeat it by the following means:

- Obtaining exclusionary agreements with Internet Service Providers and On-Line Service Providers in exchange for preferential treatment on Windows where users are presented the opportunity to sign up for services.

- Obtaining exclusionary agreements with Internet Content Providers in exchange for preferential placement on Windows desktop.

- Imposing exclusionary restrictions on computer manufacturers limiting their ability to alter the Windows boot-up sequence, which protected Microsoft's ability to use access to the valuable space on the Windows desktop in exchange for browser preference.

- Tying—both through explicit requirements and through technological integration—Internet Explorer to Windows.

- Predatory pricing by offering Internet Explorer "free" (without a separate charge) as part of Windows 98.

The Government charged that the above conduct violated Section 1 in that the agreements were unreasonable restraints on trade and Section 2 in that Microsoft illegally maintained its monopoly over operating systems and attempted to monopolize browsers. Whatever one thinks about the merits, the complaint is certainly not a bizarre application of standard antitrust analysis. Although it is somewhat unusual to base a claim of monopolization on the suppression of a *different* product that threatened to undercut an existing monopoly, the economic logic of the argument requires no revolutionary approach.

THE BATTLE OF THE ECONOMIC EXPERTS

Antitrust cases almost always involve economic experts, and the *Microsoft* trial involved a clash between two of the most distinguished microeconomic experts in the world — Franklin Fisher for the Department of Justice and Richard Schmalensee for Microsoft. This clash had several interesting twists. Schmalensee had been a graduate student of Fisher. Also, in an interesting role reversal, Fisher had been on the opposite side as the lead expert for IBM in the mammoth antitrust case that was eventually dismissed in 1982. The following bullet points summarize some of the more interesting points made over the course of hundreds of pages of direct and cross-examination.

The Department of Justice's Expert: Franklin Fisher

- Fisher's prepared direct testimony pieces together the most powerful quotes from documents and depositions supporting the Government's case.

- An "anti-competitive act" is the taking of measures that are more restrictive of competition than necessary. When the actions would not be profitable without their effect on competition, those actions can be called "predatory." Predation by a single firm requires the following two

elements: 1) it is not legitimate profit-maximizing action by itself, that is, if you do not take into account the destruction of competition; and 2) it is an action which is profit-maximizing if you do take that into account.

- A barrier to entry is something that permits the firm or firms inside to earn monopoly profits without attracting entry to bid those profits away. There are only very rare situations in which there would be a barrier to entry based upon access to capital.

- Microsoft's world-wide share of shipments of Intel-based operating systems has been approximately 90% or more in recent years. Testimony from personal computer OEMs indicates that they do not believe that they have any alternative to the acquisition and installation of the Windows operating system.

- "Network effects" exist where the value of a product to an individual user increases as the number of users increases — telephones are a common example. There is nothing inherently anti-competitive about network effects. However, to the extent that anti-competitive conduct by Microsoft exists, network effects increase the risk that such conduct will further entrench Microsoft's monopoly.

- Record evidence shows substantial demand for browsers separate from the demand for the operating system.

- Microsoft's own documents show the concern about the threat that browsers posed to the Windows operating system. The browser could threaten the operating system monopoly by providing an alternative user interface that would reduce users' reliance on the dominant operating system interface and by providing a separate set of APIs ("application programming interfaces") through which applications interact with the operating system and the computer hardware. The result could be a lessening of the applications barrier to entry.

- Multiple e-mails within Microsoft state that the decision to offer the browser for free will severely impact Netscape but will not harm Microsoft because it will continue to make revenue from the operating system.

- Fisher attacks Microsoft's argument that its conduct is profitable because of the increased sale of Windows. He notes that Microsoft's internal documents do not support the suggestion that the purpose or effect was to increase sales of Windows. Also, he notes that if the browser is a complement to the operating system, Microsoft should not care who offers it, but the facts show that they did care immensely.

- With obvious reference to the earlier court of appeals decision, Fisher notes that virtually every product design, particularly in the area of computer software, can make a plausible claim for some efficiency or benefit, although perhaps slight.

- Various acts by Microsoft are inconsistent with its argument that it has to force computer makers to take Internet Explorer because the absence of that functionality might undermine the quality of the operating system.

- Microsoft's contracts had the effect of relegating Microsoft's competitors to distribution through inferior channels which had the effect of foreclosing access to customers and raising their costs. The fact that it is possible to distribute through less efficient channels may make the anti-competitive effect less severe, but the fact that those channels are more costly means that the effect is still anti-competitive. The concept of raising rivals' cost as an anti-competitive practice is well accepted in economics. Fisher agrees that under this theory the increase should be both substantial and non-transitory.

- Fisher distinguishes between whether Netscape has succeeded in making many copies of its browser available and the number of people actually signing up for it. He views it as not a remarkably successful program. He acknowledges that Netscape's own public statements indicate that it distributed 180 million copies of its browsing software in 1998. There is a difference between distribution and getting people to use it, and most people who already have the Microsoft browser will not go to the trouble to use Netscape. Also, the vast majority of browser users tend to stay with the browser they received with their PC if there is one or, if not, the browser provided by their Internet Service Provider ("ISP"). In responding to Microsoft's contention that consumers can download the Netscape browser, Fisher says that the question is not whether they can, but whether they will do so under prevailing market conditions. Similarly, although there has been substantial distribution by mail, it is a very inefficient distribution method. Downloading, especially for complicated products such as a browser, is relatively hard, and relatively few people do it successfully.

- Internet Explorer had a flow share of new browsers of about 60% in the second and third quarter of 1998.

- Fisher agrees that failure to innovate by a market leader such as Microsoft could eventually lead to erosion of market power originally attributable to network effects. Fisher cannot be sure there won't be a new innovation at some point in the future, but he believes that if Microsoft is unchecked, the future for the next several years at least is likely to feature mostly PCs running Microsoft's Windows. Fisher disputes the notion that the presence of innovation suggests that there is not monopoly power. Monopolists have incentives to innovate.

- Fisher agrees that one cannot start with accounting profits and, on that basis alone, make any valid conclusions about market power.

- Fisher did not know that Corel has announced that it is going to create a shrink-wrapped version of its Word Perfect software for Linux.

- Fisher was not able to estimate the share Microsoft has to have to eliminate all potential competitors to insure that it achieves monopoly power. Fisher acknowledges that there may be some advantages for a software developer starting with a relatively small operating system because it provides a "protected harbor." Fisher acknowledges that it is easier to convince an applications writer to write for a platform that has a given percentage of a large market than the same percentage of a small market.

- Microsoft requires OEMs to have Internet Explorer. If the OEMs also wish to install Netscape to give a choice to the user, the OEM is free to do so. But Fisher believes there are reasons why the OEMs do not find that profitable. When pressed, Fisher is not able to provide much detail about the alleged additional expense that computer manufacturers would face by adding an additional browser. Fisher believes that the fraction of all OEM sales accounted for by PCs that feature Navigator on the desktop is small, under 1%.

- Predation is something that does not make sense from a business standpoint, but rather only makes sense because of what it does to competition. Fisher believes that this is not a "regular" predatory pricing case. With regard to predation, the requirement that the price be below a measure of cost is a way of discovering the answer to the more fundamental question whether the action is profitable. In contrast, in the present case, Microsoft took actions that were not profitable at all on any standard. Here the purpose of the predation is to protect the operating system monopoly and in some sense Microsoft has already begun to recoup that. Fisher acknowledges that distribution of browsers can lead to ancillary revenue for the company distributing them and that revenue should be considered for predation analysis.

- Microsoft incurred an opportunity cost because it ships the browser at no additional cost.

- If AOL switched to Netscape, Netscape would gain one to two market share points.

- Fisher acknowledges that software companies routinely distribute free software.

- It is difficult to determine the subjective intent of corporations and the colorful language can sometimes be misleading.

- Potential customers of Microsoft products found the integration of browser functionality into Windows as one of the more attractive features.

- Fisher has not performed any systematic study of product reviews on superiority of the two browsers.

- For purposes of the balance between the anti-competitive aspects and the benefits of Microsoft's actions, there is an additional question of whether the benefits have been achieved in the "least restrictive way."

- Online services, including AOL, have lots of agreements with computer makers to be on the desktop.

- Twelve ISP companies had agreements with Microsoft. Fisher does not know the exact amount of distribution achieved through these agreements.

- Fisher admits that he does not know whether the absolute number of Netscape users has gone down, although he thinks that it has. The share has declined.

- Microsoft's price discrimination among computer manufacturers shows market power. Also, that price discrimination is a way of rewarding certain companies for cooperation in a system that protects Microsoft's dominant position.

- Innovation can change monopoly power. He believes that this case is about Microsoft's attempts to avoid exactly that result.

- Microsoft's efforts to hinder the development of Java programs that will run well on Windows is inconsistent with what one would assume to be Microsoft's normal pro-competitive interest in having programs run well on Windows. The improvement of a complementary product would increase the demand for Windows.

- Fisher defended the adequacy of the data sources used to measure share. He used a source known as Adknowledge, which measures the hits by certain kinds of browsers on certain designated advertising in identified sites.

- For Microsoft's strategy to succeed, it is not necessary to completely destroy Netscape. Microsoft's incremental share over the period tested was 57%.

- The Netscape browser and Java are not in the same market as Windows because they are not good substitutes for an operating system. Their importance is that they can facilitate the entry of new operating systems because they provide a way to avoid the applications barrier to entry.

- On balance, up to the present point, consumers have not been hurt by Microsoft's conduct. As with predatory pricing generally, consumers may have benefitted in the short run from low prices for browsers that Microsoft has used its power to protect its operating system monopoly from a threat that might not have materialized by this time anyway. One cannot know with any kind of certainty when or even whether the threats from Java and the browser would have led to a breakdown of the applications barrier to entry and therefore more competition in operating systems. Fisher believes, however, that consumers have either been denied choices in browsers or that their choices have been conditioned in certain ways, which is a direct and immediate harm.

- If combining the browser and the operating system carried with it benefits for consumers, one would expect that consumers would choose the combined version as opposed to an uncombined version.

- Fisher was not aware that the Compaq web site shows that all new notebooks and desktop computers have Netscape communicator at the desktop.

- Schmalensee's decision not to define a market for purposes of his analysis was the beginning of muddled thinking.

- It may be the case that the operating system market is a "winner take all" market. The issue, however, is what a firm in that position is permitted to do in order to protect his power.

Microsoft's Expert: Richard Schmalensee

- Microsoft has no power over software distribution, which is the relevant consideration for the Government's claim of foreclosure of access to consumers.

- Even the Government's economists projected that Netscape would have a market share of browsers of 35% in 2001, which is inconsistent with monopoly.

- With the large component of intellectual property in software, the "competitive price" is difficult to determine. Standard economics would suggest that price should equal marginal cost, but the marginal cost of producing another copy of software is close to zero.

- Consumers are not locked in, but they will not switch unless the alternative is significantly better.

- The history of the industry is that leadership is transitory. Microsoft does not have a durable monopoly, but rather has won a series of races for operating systems.

- A barrier is a cost or obstacle that deters more efficient entry. Under this standard, there are no significant barriers. One just needs programmers and money to pay them, and both are available. Netscape is an example of easy entry. Compared to other product introductions, the $10 million that Netscape spent in its first year was small.

- "Network effects" are when consumer place a higher value on a product the more other consumers also use that product.

- There is not an "applications barrier." The Mac OS has thousands of applications written for it, although it only has 4% of the sales of microcomputers. There are examples of applications being written for promising platforms: Linux, Be, Palm Pilot.

- Java is a competitive threat.

- Network computers are a competitive threat.

- For software, behavioral standards for assessing monopoly power are more meaningful than structural standards such as the Merger Guidelines. Microsoft acts as though there is competition. The quality-adjusted price has fallen.

- Microsoft's plans to integrate the browser were in place in April of 1994. Netscape was not founded until April of 1994, and its final version did not come out until December of 1994. Microsoft did not gain appreciably in browser share until Internet Explorer 3 pulled even with Netscape and then Internet Explorer 4 was rated as superior, showing that there was competition on the merits.

- There is a long history in software of companies adding functionality, which is what Microsoft has done with its browser.

- Netscape's share declined by less than 5 percentage points from early 1996 to the end of the summer of 1998

- Windows desktop is only one of many distribution channels.

- 41% of computer sales are to medium or large businesses or organizations, and Microsoft puts no restrictions on their changes.

- While OEMs are not allowed to delete the Internet Explorer icon, consumers can do so easily.

- The desktop has room for 49 icons. Microsoft requires computer OEMs to carry 7. OEMs are free to add Netscape.

- AOL paid OEMs for placement on their screens.

- AOL chose Internet Explorer because of better functions and Microsoft's responsiveness to its needs. Internet Explorer was "componentized" so that information could be obtained within an application without launching a browser that was obviously a different application. AOL had a right to terminate before January 1, 1999.

- Internet service provider contracts are simply "co-marketing agreements." Microsoft had no monopoly over them.

- In April 1998, Microsoft waived the Internet Content Provider agreements.

- Under the Government's theory, Netscape and Sun should be in the relevant market.

- Removing Internet Explorer is impossible.

- There is no "market" for browsers.

- There is no reason to believe that Microsoft could or believed that it could recoup the alleged predation. Microsoft's actions are justified by the opportunity to sell more Windows because of increased value of the operating system.

- The AOL deal is critical, amounting to a large part of Internet Explorer share. Especially now that AOL owns Netscape, this is too slender a reed for predation.

- There is no proof that Netscape has or is likely to have too few users to justify application attention.

- Fisher's definition of predation is "an act that is not expected to be profitable in the long run without accounting for the supra-normal profits that can be earned because of the adverse effects on competition." The Government fails to take account of the winner-take-all nature of the software business. There is no economically defensible standard for supra-competitive profits.

- The suggested remedies would lead to under-investment in technology.

KEY POINTS FROM THE FINDINGS OF FACT

Market Definition:

- The market is Intel-compatible PC operating systems ("OS") world-wide.
- Even a substantial increase in the price of Intel-compatible OS above the competitive level would result in only a trivial increase in the price of a system.
- Servers and server software are not substitutes.
- The Apple system is priced substantially higher than the average Intel system.
- Other devices such as handheld computers, smart telephones, set-top boxes, and game consoles are not substitutes. They do not perform all the functions of a PC.
- Network computers have yet to attract substantial consumer demand. If they overcome the problems facing them, it will happen even if Intel systems are priced at competitive levels.
- Middleware such as browsers and Java do not expose enough APIs (application programming interfaces) to be a substitute.
- Supply response of other OS is limited by the applications barrier.
- Middleware could erode the barrier, but it remains to be seen if it will flourish at all.

Monopoly Power

- Microsoft has very high market share—90 to 95%.
- Microsoft is protected by an "applications barrier to entry." Without a larger number of applications, an OS will fail.
- Software development is characterized by substantial economies of scale. Fixed costs are high. Marginal costs are very low. Development costs are sunk. The result is that developers seek to sell as many copies as possible.
- "Porting" (adapting) applications to other operating systems is expensive.
- Consumer demand for Windows enjoys positive "network effects."
- Windows supports 70,000 applications.
- A protected harbor of a new OS might encourage some applications but would ultimately stall.
- Cost to new entrant would exceed MS's cost.
- IBM OS/2 Warp has 2,500 applications.

- Mac OS has 12,000 applications.
- BeOS has 1,000 applications.
- Linux is at an early stage of development.
- Cloning 32-bit Windows APIs is virtually impossible. The number of APIs is very large and constantly changing. IBM tried and failed.
- OEMs believe there is no alternative to Windows.
- Microsoft admitted that piracy was its principal competition.
- Price competition comes from long-term innovation. Leaders in the area are then replaced by technological advance. But that pattern does not prevent Microsoft from having monopoly power now.
- Microsoft does not consider other OS when setting price.
- Price discrimination among OEMs by Microsoft is consistent with monopoly power.
- It is not possible with available data to determine with any level of confidence whether the price that a profit-maximizing firm with monopoly power would charge comports with what Microsoft charges, but it does not matter. Microsoft's actions are consistent with a long-term strategy. Also, Microsoft uses power to impose restrictions.

"Middleware" Threat

- Gates recognized that Netscape could "move the key API into the client to commoditize the underlying operating system." — that is, eliminate the unique advantage of Windows.
- Sun's implementation of Java was also viewed as a threat.
- Windows exposes nearly 10,000 APIs. Navigator and Java class libraries total less than 1,000.

KEY POINTS FROM THE CONCLUSIONS OF LAW

In summary the court found that "Microsoft maintained its monopoly power by anti-competitive means and attempted to monopolize the Web browser market, both in violation of section 2. Microsoft also violated section 1 of the Sherman Act by unlawfully tying its Web browser to its operating system. The facts found do not support the conclusion, however, that the effect of Microsoft's marketing arrangements with other companies constituted unlawful exclusive dealing under criteria established by leading decisions under section 1."

- The court repeated the well-established law on the two elements of a section 2 Sherman Act violation: (1) possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historical accident.

- The court recognized that market definition was an essential step in the analysis.

- Referring back to its Findings of Fact, the court stated that the relevant market was "Intel-compatible PC operating systems."

- The court had previously found that Microsoft possessed a dominant share of the relevant market and, significantly, that there is an "applications barrier to entry" that protected that share.

- The court found that Microsoft had failed to rebut the presumption of monopoly power and that there was abundant corroborative evidence of monopoly power in the record.

Maintenance of Monopoly Power by Anti-Competitive Means

- The court defined the "threshold question" as "whether the defendant's conduct is 'exclusionary' — that is, whether it has restricted significantly, or threatens to restrict significantly, the ability of other firms to compete in the relevant market on the merits of what they offer customers."

- Where there is significant exclusionary impact, the conduct will be labeled "anti-competitive" and liability will attach, unless the defendant comes forward with "specific, pro-competitive business motivations that explain the full extent of its exclusionary conduct."

- The court equated "predation" with substantial exclusionary effect. It defined predation as aggression against business rivals with business practices that are not profit maximizing except for the prospect of driving rivals from the market or disciplining their behavior.

- The court repeated its previous finding that Microsoft's conduct was driven by the recognition that "middleware" was the threat that could eliminate the applications barrier to entry. Netscape's Navigator Web browser and Sun's implementation of the Java technology were the two greatest threats from the development of middleware.

Microsoft's Actions to Combat the Browser Threat

- The court found that, in June 1995, Microsoft proposed that Netscape abstain from releasing browsing software for Windows. When Netscape refused to cooperate, Microsoft took a series of actions designed to keep Netscape from succeeding. "Microsoft thus set out to maximize Internet Explorer's share of browser usage at Navigator's expense."

The OEM Channel

- Microsoft proceeded on three fronts. First, it bound Explorer to Windows with contractual and later technological ties. Second, it imposed limits on the freedom of OEMs to reconfigure or modify Windows 95 and Windows 98 in ways that might generate usage for Navigator. Third, it used incentives and threats to induce key OEMs to design their distributional, promotional, and technical efforts to favor Explorer to the exclusion of Navigator.

- Microsoft's legitimate business objectives do not justify the full extent of the significant exclusionary impact.

- Microsoft's federal copyright rights neither explain nor operate to immunize Microsoft's conduct under the Sherman Act.

The Internet Access Providers ("IAPs") Channel

- Microsoft licensed Explorer to hundreds of IAPs for no charge.

- Microsoft gave valuable promotional treatment to the ten most important IAPs in exchange for their commitment to promote Explorer to the exclusion of Navigator.

- Microsoft gave rebates and in some cases made outright payments to IAPs in exchange for efforts to upgrade existing subscribers to client software that came bundled with Explorer instead of Navigator.

- The court recognized that a desire to limit "free riding" on the investment in certain consumer-oriented features could serve as a pro-competitive business motivation, but found that that motivation does not explain the "full extent" of the restrictions that Microsoft actually imposed.

- The court also recognized as pro-competitive a desire to "foster brand association" but again found that that justification could not explain the full extent of the challenged restrictions.

- The court concluded that Microsoft's actions in the OEM and IAP channels had ostracized Navigator as a practical matter from the two channels that lead most efficiently to browser usage.

Combating the Java Threat

- Microsoft created a Java implementation for Windows that undermined portability and was incompatible with other implementations. In effect, the result was to diminish the ability of Java to move seamlessly across operating systems.

- Microsoft successfully pressured Intel to abstain from aiding in Sun's and Netscape's Java development work.

Microsoft's Conduct Taken as a Whole

- The court recognized that Microsoft's actions could be broken into discreet categories of activity. It stated that "several" of those categories independently satisfy the second element of a Section 2 monopoly maintenance claim. The court, however, relied on the doctrine that Microsoft's actions should be viewed as "a single, well-coordinated course of action."

- The court acknowledged that the evidence does not prove that the entrepreneurial actions challenged by Microsoft would have succeeded absent Microsoft's actions.

- The court concluded that Microsoft's conduct as a whole was "predacious." The court noted that Microsoft had paid vast sums of money and renounced much more in lost revenue in taking the actions that it took. The court noted that Microsoft had no intention of ever charging for licenses for its browser. The court concluded that Microsoft's actions were only rational if the purpose was "to perpetuate the applications barrier to entry."

Attempting to Obtain Monopoly Power in a Second Market by Anti-Competitive Means

- For this analysis, the court defined the second market as "the browser market."

- Specific intent was established by Microsoft's effort to convince Netscape to stop developing browsing software for Windows.

- While acknowledging that Microsoft's top executives never expressly declared acquisition of monopoly power to be the objective, the court concluded that specific intent could be inferred from the campaign that they launched.

- The offer to Netscape to divide the market was sufficient for a finding of dangerous probability.

- The acts undertaken by Microsoft in conjunction with its rising market share were also sufficient for a finding of dangerous probability.

Section 1 of the Sherman Act

- The court found that notwithstanding the intervening decision of the D.C. Circuit, technological tying by Microsoft was a viable claim.

- The interesting issues in the tying analysis are whether there are two products and whether technological tying is subject to an entirely different standard of analysis, as suggested by the D.C. Circuit.

Exclusive Dealing Arrangements

- Microsoft's various contractual agreements with some OLSs, ICPs, ISBs, Compaq and Apple were challenged as exclusive dealing arrangements under Section 1.

- The court recognized that the standard for analyzing such agreements is whether they "work to place so much of a market's available distribution outlets in the hands of a single firm as to make it difficult for other firms to continue to compete effectively, or even to exist, in the relevant market."

- The court identified the following factors as those relevant to an agreement's likely anti-competitive effects: (1) the degree of exclusivity; (2) whether the percentage of the market foreclosed is substantial enough to largely exclude competitors from competition; (3) the actual anti-competitive effect; (4) the existence of any legitimate, pro-competitive justifications; (5) the length and irrevocability of the agreements; and (6) the availability of less restrictive means for achieving the same benefits.

- The court found that: “Where courts have found that the agreements in question failed to foreclose absolutely outlets that together accounted for a substantial percentage of the total distribution of the relevant products, they have consistently declined to assign liability.” In a previous holding, the court held that unless Microsoft’s agreements excluded Netscape altogether from access to roughly 40% of the browser market, the court should decline to find such agreements in violation of Section 1.

- Although some of Microsoft’s agreements were sufficiently exclusive, the court found that Section 1 had not been violated because Microsoft’s agreements “did not ultimately deprive Netscape of the ability to have access to every PC user worldwide to offer an opportunity to install Navigator.” The court noted that Navigator could be downloaded from the Internet, was available in many retail channels, and had been mailed directly to a large number of households.

- The court expressly stated that its finding of no liability under Section 1 did not change or diminish its conclusion that the same agreements, including the non-exclusive ones, violated Section 2.

- The court noted that other courts had held that there was not liability under Section 1 “where alternative channels of distribution are available to the competitor, even if those channels are not as efficient or reliable as the channels foreclosed by the defendant.”

KEY POINTS FROM THE FINAL JUDGMENT

Divestiture

- Separation of the Operating Systems Business from the Applications Business.

- Intellectual property used in both Businesses shall be assigned to the Applications Business and the Operating Systems Business shall be granted a perpetual royalty-free license.

- Non-retribution requirement for persons or entities providing evidence in this case.

Conduct Provisions

- Provisions to remain in effect until the earlier of three years after Implementation or expiration of the ten-year term of the Final Judgment.

- Ban on adverse actions against OEMs for supporting competing products.

- Requirement of uniform terms for Windows operation system licenses.

- Prohibition against restricting OEMs and product configurations relating to boot sequence, start-up folder, Internet connection wizard, etc.

- Requirement of disclosing APIs, communications interfaces, technical information to ISVs, IHVs, and OEMs in the same form and timeliness that Microsoft disseminates such information to its own personnel.

- Prohibition against knowing interference with performance of other software products.

- Prohibition against actions against ISVs or IHVs based upon the decision to use or distribute Microsoft products, other non-Microsoft products, or exercising any alternatives available under the Final Judgment.

- Prohibition against exclusive dealing relating to Platform Software.

- Prohibition against contractual tying.

- Prohibition against binding middleware products to operating system products unless there are means for OEMs or end users to remove access to the middleware products.

- Prohibition against agreements with actual or potential Platform Software competitors agreeing to refrain from competition.

- Requirement of continued licensing of predecessor versions of Operation System Products.

- Internal antitrust compliance requirements.

- Requirement of compliance inspection rights by Government.

LESSONS AND QUESTIONS FROM *MICROSOFT*

Discovery Lesson: Beware of e-mail/Do not rest until you get the e-mail

The Government reportedly obtained and reviewed more than 3 million pages of e-mail from Microsoft. Several points are obvious: Microsoft used e-mail extensively, including at the very highest level; Microsoft's people and/or systems saved a great quantity of e-mail; and Microsoft had the ability, at least under compulsory process, to retrieve the saved e-mails.

As every litigator knows, the first thing you want to read is the hand-written note. E-mails are actually better. They have all of the unguarded, spontaneous, irreverent, scurrilous qualities that hand-written notes have, and the added bonus of being easily readable by lawyers, courts, and jurors.

Microsoft would be fundamentally different and enormously more difficult for the Government if it were not for the e-mails. The Government's Special Trial Counsel, David Boies, has received deservedly high praise for his skills in cross-examination, but, as I am sure he would agree, it is much easier if you have in your hand a document written by the witness that flatly contradicts his trial testimony.

Trial Management Lesson: With Effective Case Management and a Strong Judge, Antitrust Cases Do not Have to Last Forever

Although the trial of the case lasted longer than was originally estimated (the case was expected to last six weeks, but actually took 76 days spread over an eleven-month span of time), this major case has been developed and tried with surprising expedition. Judge

Jackson took the boring and time-consuming process of direct examination out of the case by requiring the parties to submit the direct testimony in written narrative form, although it came back in to some extent under the heading of recross and rebuttal. He also limited the parties to twelve witnesses each and three rebuttal witnesses.

At one level, the speed at which the case was prepared for trial was even more impressive. The case was filed by the Government on May 18, 1998. Judge Jackson ruled that the preliminary injunction and trial on the merits would be consolidated, and trial began on October 19, 1998. In fairness, one has to discount the speed to some extent, because the federal government had been investigating Microsoft since 1990, and, unlike the typical civil case, the Antitrust Division obviously had obtained a great deal of its discovery before the case was even filed. Indeed, one of the striking things about *Microsoft* is the Government's complaint which, full of direct quotations from documents and witness statements, actually reads more like a summary judgment brief than the typical notice pleading complaint. In any event, the comparison between *Microsoft* and the earlier Government case against IBM could not be more stark. Thirteen years after it was filed, the IBM case was not close to being over when the then head of the Antitrust Division, Bill Baxter, decided to dismiss it.

Deposition Preparation Lesson: Some People Have to Remember

Another of David Boies' trial successes was the effective juxtaposition of the video deposition testimony of Bill Gates with the voluminous e-mail traffic to and from him. By all accounts, Gates was a very poor witness who contributed significantly to Judge Jackson's finding that Microsoft's witnesses were not credible. During the trial, Microsoft spokesmen tried to explain Gates' performance as the result of his following his lawyers' instruction about how to act at a deposition. Consistent with the deposition preparation advice of some lawyers, Gates did not understand many common words in the English language and in the computer industry. His recall of events was often weak. This performance was very hard to square with the image that emerged from the e-mails of a CEO who was very involved at both the strategic and the operational level.

Gates is one of those witnesses who has to know and has to remember. It would have been better to accept the undeniable points of the e-mails, be proud of them, and try to put an affirmative spin on them. Certainly his and the company's credibility would have been enhanced by doing so. Instead, the apparent evasiveness has raised suspicions and underscored the inference of monopolistic intent to eliminate Netscape that emerged from many of the e-mails. One cannot know how good a witness Gates could have been, but his lawyers should have considered the effect of the deposition being played at trial.

Law and Economics Lesson: Network Effects

Network effects means that the value of a product increases as more people decide to use it, effectively creating a single "standard." *See generally* HERBERT HOVENKAMP, ANTITRUST LAW ¶ 2233 (1999). Network effects are not unique to software. Telephones are an obvious example: if one is the only person with a telephone, its value is close to zero, but that value increases with each new subscriber. Although not unique to software, network effects are important, as anyone who has tried to exchange documents with someone with a different and incompatible word-processing software knows.

Both sides in the *Microsoft* case discuss network effects. Microsoft argues that it is the natural state of things in software for there to be a dominant product in most categories. Microsoft further argues, however, that the dominant firm is always in danger

of being displaced by the next good idea. The Government argues that Microsoft's monopoly is entrenched by network effects and the closely related fact that there is a vast array of applications software available for Windows. To produce a similar array of software for any competing operating system would take enormous time and investment by other software companies.

The case law is not particularly helpful in this area. Cases dealing with standard setting that leads to industry-wide standards may have some relevance. As with technological tying, the issue can easily become whether the standard selected is the "best," a task for which courts are generally unsuited. *See id.* ¶ 2233, at 366. Thus, the more appropriate role for the courts seems to be to focus on whether the standard selection process is fair, be it a formalized process such as a standard set by committee or the more informal market selection process. *See, e.g.*, *Addamax Corp. v. Open Software Found.*, 888 F. Supp. 274, 280, 284-85 (D. Mass. 1995) (focusing less on identifying the best technology and more on allegations that standard had been selected without regard to merit).

Law and Economics Lesson: Scale Economies and Intellectual Property

Economies of scale are an important consideration in any antitrust analysis. In the extreme case of a situation where the average cost of producing the product in question declines over the entire range of production demanded in the market, economists describe the situation as a "natural monopoly." For example, for a given level of demand in an area, the cost of producing electricity may decline continuously, with the result that there would eventually be only one supplier. Historically, natural monopolies have been subjected to public utility type of regulation.

Software has characteristics that are similar to but different from classic scale economies. Software is predominantly intellectual property, the unusual feature of which is that the marginal cost of reproducing it is essentially zero, although the total cost of producing it may be very large. This, of course, is the reason society finds it desirable to provide legal protection for intellectual property. Without such protection, companies would be unable to recover their cost of development, and the level of innovation would be less than optimal. *See generally* PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 407, at (1995) (discussing importance of encouraging innovation through departures from perfect competition model, but questioning whether possession of market power produces more innovative efforts). This "zero marginal cost" characteristic of software is true of Windows, but no less true of other software products that have far less demand and that face intense competition.

The cost characteristics of software intrude into the *Microsoft* case in the Government's argument that Microsoft engaged in predatory pricing by including its browser in Windows without a separate charge. It is undisputed that Microsoft spent on the order of $500 million in developing Internet Explorer, and yet it announced that the product would be "free forever." The Government argues with some force that the usual predatory pricing standard of pricing below a measure of cost makes no sense where marginal cost is zero.

On a related issue, business and technological changes in the software industry made the trial in *Microsoft* almost a current events project rather than the usual fixed record. The most significant example is, of course, the announcement in the middle of the case that AOL was acquiring Netscape and entering into a strategic alliance with Sun, the principal proponent of Java. A significant part of the market share of Internet Explorer comes through its adoption by AOL for its subscribers, a contract that expires in 2001.

Questions of Law: Does Antitrust Have a Role in High-Tech, Rapidly Changing Industries?

The critics of the *Microsoft* case often rely on the fact that the computer software business involves sophisticated technology and is rapidly changing as a basis for concluding that the case should never have been brought. Assuming that one acknowledges that there is a legitimate role for antitrust enforcement in the economy in general, this criticism must turn on the notion that there is something unique about rapidly changing industries involving high technology. Of course, rapid change is commonly associated with high technology, although not necessarily so. The antitrust rationale for this argument generally relates to some combination of the difficulty of determining the existence of meaningful market power in such industries and skepticism as to whether such market power can be eradicated by legal processes more quickly than by market changes.

A number of high-tech industries are characterized by what economists call "network effects" as discussed above. In such industries, there is a tendency for consumers to gravitate to one technology which then has a tendency to become the dominant technology, at least at any given time. The reason is that there are increasing advantages to the use of a particular technology when increasingly large numbers of people also use it. Some economists have observed that in many of the high-technology areas, there tends to be a company and a technology that becomes more widely adopted and therefore has the network effect advantages mentioned above. While there may be some natural tendency for this kind of natural dominance to occur, however, there is no reason why the antitrust laws should not apply to eliminate *artificial* practices that tend to concentrate or further concentrate markets.

The other reason why a number of critics argue that antitrust has a limited role in rapidly changing high-technology industries is the very fact that they are rapidly changing. Change in such industries sometimes occurs through major "paradigm shifts" that have the effect of completely displacing prior technology and the sometimes dominant firm that was the leading provider of such technology. If one were confident that rapid change would continue to occur, this argument would have significant power, especially given the typically slow process of trying and then appealing to a conclusion major antitrust cases. There is a risk that the "facts on the ground" will have fundamentally changed by the time the legal process has concluded. This is clearly what happened during the thirteen-year pendency of the Government case against IBM. Again, however, where the practices being challenged are clearly directed at preserving existing market dominance in the face of potential paradigm shifts, there seems to be little reason why the antitrust laws should not be applied.

There can be no serious dispute that there has been and continues to be rapid technological change in the software business. Microsoft argues that this characteristic of the industry is a major reason why the monopolization case against it is flawed. When there is rapid technological change, positions that seem entrenched now may quickly be superceded by new technology. This factor has been included in the Government Merger Guidelines, although it does not specifically appear in the 1992 Guidelines. U.S. DEPARTMENT OF JUSTICE MERGER GUIDELINES section 3.411 n. 23 (1984). While it is certainly true in hindsight that technology can change the competitive landscape, it is less clear how one can confidently predict that the current level of technological change will continue such that future technological change will necessarily undercut the market dominance in question. Moreover, rapid technological change and the perceived threat to a firm's market dominance may spark even more aggressive anti-competitive conduct. Indeed, the Government's allegations about Microsoft's reaction to the development of browsers and the Internet can be seen as such a reaction.

Questions of Law: What Does Tying Mean in the Software Business?

Although the tying doctrine is one of the more venerable of the *per se* antitrust doctrines, it has always had its doctrinal problems. The first law review article that I wrote as a brand new law professor in the early 1980s was on these doctrinal problems, and most of them still exist. The sense that the doctrine is flawed led four Justices to vote in favor of scrapping the *per se* rule altogether in *Jefferson Parish Hospital District No. 2 v. Hyde,* 466 U.S. 2 (1984).

The tying doctrine is based on the simple notion that someone will use market power over the tying product to harm competition over the tied product. The competition to be protected is with the tied product but, under the *per se* rule, one examines that issue only indirectly, at best. The fight typically centers on whether there are two products and whether the defendant has the requisite market power over *the tying product*. Very often, one could resolve the question of whether the alleged tie could possibly harm competition in the tied product market with far less trouble simply by looking directly at that market.

In *Microsoft*, while the Government alleged facts that would invoke the *per se* rule, it did not rest on those grounds alone. Rather, the Government alleged and proved that there was harm to competition in the tied browser market. Unlike the usual case, the Government made the additional argument that the harm to competition in the tied product market will have and is intended to have the effect of further entrenching Microsoft's monopoly in the tying product—the Windows operating system.

The most fundamental requirement for a tying case is that there be two products, so that one can be tied to the other one. As in many cases, this was the big issue in *Microsoft*. The Government, of course, alleged that operating systems are one product and browsers are another. Microsoft asserted its browsers were not a separate product but rather were just "functionality" in the operating system.

In reviewing the preliminary injunction based on the consent decree, the D.C. Circuit held in dicta that any "plausible claim" of advantage from integrating the two products immunized software designs from antitrust scrutiny. The Court of Appeals agreed with Microsoft, with some historical justification, that the inexorable process of the software business has been for products to include ever more functionality, such that many products that were once separate products are now commonly accepted as being part of a larger product and are not even offered separately anymore. In effect, the consent decree opinion created an exemption from the antitrust laws for operating system designs because a software system is not like hardware whose "physical existence makes it easier to identify the act of combination." 147 F.3d 935, 948 n.11 (D.C. Cir. 1998).

In contrast, Judge Jackson's Conclusions of Law used existing Supreme Court precedent to determine that Microsoft was involved in illegal technological tying. Judge Jackson relied on *Jefferson Parish*, where the Supreme Court held that a hospital offering hospital services and anesthesiology services as a package could not be found to have violated the antitrust tying rules unless the evidence established that "consumers perceived the services as separate products for which they desired a choice, and that the package had the effect of forcing consumers to purchase an unwanted product." *Jefferson Parish*, 466 U.S. at 21-14, 28-29. Judge Jackson also relied upon *Eastman Kodak v. Image Technical Services, Inc.*, 504 U.S. 451 (1992), where the Supreme Court held that a manufacturer of photocopying and micrographics equipment that had agreed to sell replacement parts for its machines only to those customers who also agreed to purchase repair services was guilty of tying if the evidence established the existence of consumer demand for parts and services separately. *Id*. at 463.

The Supreme Court's analysis based on consumer demand would tend to support the conclusion that operating systems and browsers are separate products. The "plausible advantage" test, however, seems directed to the special problem of technological tying which was not present in those cases. The conclusion is that the courts should not second-guess such decisions, regardless of whether the conclusion is expressed in terms of "one product" or otherwise.

Microsoft was not the first time the courts have had to address this question. The issue also arose in the various *IBM* cases, where, interestingly David Boies and Franklin Fisher were counsel and economic expert, respectively, for IBM. For example, in *ILC Peripherals Leasing Corp. v. IBM,* 448 F. Supp. 228, 233 (N.D. Cal. 1978), *aff'd* 636 F. 2d 1188 (9th Cir. 1980) (per curiam), the court held "If IBM had simply bolted a disk pack or data module into a drive and sold the two items as a unit for a single price, the 'aggregation' would clearly have been an illegal tying arrangement." Not far beyond the simple bolting of two products together, however, lies the technological quagmire into which courts have been reluctant to wade. *See e.g., Telex Corp. v. IBM,* 367 F. Supp. 258, 347 (N.D. Okla. 1973), *rev'd on other grounds*, 510 F.2d 894 (10th Cir. 1975) (refusing to find illegal tie between memory and control functions of CPU because "[t]o rule otherwise would enmesh the courts with technical and uncertain inquiry into the technological justifiability of functional integration and cast unfortunate doubt on the legality of product innovation in serious detriment to the industry and without legitimate antitrust purpose"). Indeed Areeda, like the majority in the D.C. Circuit's *Microsoft* consent decree opinion, would err in favor of finding a single product in cases of technological tying, thus avoiding Section 1 liability. *See e.g.,* PHILLIP E. AREEDA ET AL., ANTITRUST LAW ¶ 1746b, at 226 (1996); *see also* PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 1746.1 (1999 Supp.) (concluding that in the case of computer software, the better course is to analyze the conduct under section 2 of the Sherman Act rather than under traditional rules of tying law).

On appeal, one interesting issue will be whether the D.C. Circuit can find a middle ground that allows meaningful application of the antitrust laws without injecting the courts into technical issues to an excessive intent.

Questions of Law: Can a Monopolist Be Found Liable Under Section 2 for Practices That Any Other Company Could Engage in Without Violating Section 1?

Microsoft clearly presents a fundamental question of antitrust policy that is inherent in Section 2 of the Sherman Act. It is clear that possession of monopoly power alone is not illegal. The question is how bad a monopolist must be before we will impose legal liability. One view is that monopoly is so abhorrent to our economic system that it should take very little provocation to find liability and undertake corrective actions. The other view is that society should want even monopolists to compete aggressively and that liability should not attach for practices that are not independently illegal.

Judge Jackson found that Microsoft violated Section 2 by, among other things, entering into exclusive dealing arrangements that prevented Netscape from entering the market through the most efficient avenues. At the same time, he found that these exclusive agreements did not violate Section 1 because they did not completely foreclose Netscape from 40% of the market. Nevertheless, the Court held, these agreements "rendered Netscape harmless as a platform threat and preserved Microsoft's operating system monopoly, in violation of section 2." If the other exclusionary practices, such as tying, are rejected, the decision on appeal may turn on this issue.

It is clear that monopolists may be found liable under Section 2 in situations that would not violate Section 1 for acts that would not be a problem if done by a company with a small share of a competitive market. In defending a tying case, for example, a firm that is not a monopolist may be able to avoid liability by proving the two products allegedly tied are actually a single product thus taking the case out of the tying doctrine. The monopolist may also succeed in proving this claim, but still be found liable. "[A] monopolist violates section 2 [of the Sherman Act] when its practices unreasonably create, maintain, or enhance its monopoly power." PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 776.1, at 242 (1999 Supp.); *see also United States v. Griffith*, 334 U.S. 100, 107-08 (1948). Thus, a monopolist's decision to "bundle" may be unlawful if that decision unreasonably enhances or maintains its monopoly position. The policy of protecting innovation that informs the tying analysis does not, however, cease to be a consideration in a Section 2 case. *See* ANTITRUST LAW ¶ 776.1, at 242 (noting the question in a section 2 case will be whether the redesign injures competitors unnecessarily and whether "antitrust application would chill legitimate innovation excessively").

The issue is more squarely presented where the element of agreement is present and the issue is the extent of the foreclosure, as in *Microsoft*. Although it is clear that exclusive dealing arrangements can provide the exclusionary conduct necessary to make out a Section 2 violation, there is little law tracing the line between conduct that may be "exclusionary" under Section 2 but not in violation of Section 1. *See* ANTITRUST LAW ¶ 760b7, at 51-52 (1996) (recognizing instances in which exclusive dealing constitutes a Section 2 violation, but focusing predominantly on exclusive dealing-like conduct that falls short of constituting an "agreement"); *General Indus. Corp. v. Hartz Mountain Corp.*, 810 F.2d 795, 800 (8th Cir. 1987) (electing to hold defendant liable under section 2 for exclusive dealing-like conduct in which parties did not clearly reach an agreement). In *U.S. Healthcare, Inc. v. Healthsource, Inc.*, 986 F.2d 589, 597 (1st Cir. 1993), the court considered, but chose not to address, whether exclusive contracts that do not violate Section 1 might still violate Section 2. Defendant Healthsource, an HMO, entered exclusive dealing arrangements with primary-care physicians that were challenged under Sections 1 and 2 by U.S. Healthcare, a competitor. *Id.* at 592-93. The court concluded that the arrangement was not unreasonable under Section 1 because plaintiff offered no evidence of substantial market foreclosure. *Id.* at 595-97. Turning to U.S. Healthcare's challenge of the arrangement under Section 2, the court acknowledged that "[e]xclusive contracts might in some situations constitute the wrongful act that is an ingredient in monopolization claims under Section 2." *Id.* at 597. The court then brushed against the issue of whether agreements that do not violate Section 1 might still violate Section 2:

> It may be unnecessary to consider this claim since, as we have already held, U.S. Healthcare has failed to show a substantial foreclosure effect from the exclusivity clause. After all, an act can be wrongful in the context of Section 2 only where it has or threatens to have a significant exclusionary impact. <u>But a lesser showing of likely effect *might* be required if the actor were a monopolist or one within striking distance</u>.

Id. at 597-98 (italics in original, underlining added). But the court stopped its analysis there, choosing instead to affirm the finding of no liability on the ground that U.S. Healthcare had failed to establish the relevant market for its Section 2 claims. *Id.* at 599.

In *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980), the court contemplated the situation in which a monopolist might violate Section 2 by engaging in exclusive dealing arrangements that fall short of

violating Section 1. *Id.* at 274-75. The distinction stems from the initial understanding that Sections 1 and 2 are intended to prevent different evils and, therefore, a court might reach different conclusions as to the legality of the same conduct depending upon the analytical framework under which the conduct is scrutinized.

> The gravamen of a charge under section 1 of the Sherman Act is conduct in restraint of trade; no fundamental alteration of market structure is necessary. Thus, certain restrictive practices among competitors, such as price fixing, are illegal *per se*. That the conspirators lack the market power to affect prices is immaterial. Section 2, by contrast, is aimed primarily not at improper conduct but at a pernicious market structure in which the concentration of power saps the salubrious influence of competition.

Id. at 272 (citations omitted).

Monopoly power is "inherently evil" because "it is laden with the possibility of abuse; . . . it encourages sloth rather than the active quest for excellence; and . . . it tends to damage the very fabric of our economy and our society." *Id.* at 273. For these reasons, a company with monopoly power must be kept on a very short leash. While it is not illegal *per se* to possess such power, "the firm must refrain at all times from conduct directed at smothering competition. . . . [A] firm with a legitimately achieved monopoly may not wield the resulting power to tighten its hold on the market." *Id.* at 275.

This seems to be the unstated rationale of the *Microsoft* Court: Microsoft may not wield its monopoly power to tighten its hold on the market by excluding Netscape, even though the means by which it has done this, exclusive dealing arrangements, do not foreclose enough of the market to violate Section 1. While a monopolist may compete vigorously, it must do so on a short leash. A monopolist is held to a higher standard, but the line is not clear, making success on appeal far from clear.

Questions of Law: When Are Exclusive Contracts Illegal, Particularly if They Do Not Completely Exclude?

Microsoft may make important law on exclusive dealing regardless of monopoly power. Microsoft contracted with various players in the computer and Internet fields to use Internet Explorer. These contracts were either expressly exclusive or provided for very limited use of Netscape's Navigator browser. In his 1998 denial of Microsoft's motion for summary judgment, Judge Jackson had ruled that such contracts were not illegal under Section 1 unless they completely foreclosed more than 40% of the relevant market. 1998 WL 6114485, at *19 (D.D.C. Sept. 14, 1998). In his Conclusions of Law, Judge Jackson listed these contracts as exclusionary practices that were a basis for finding Microsoft liable under Section 2, but found that because the contracts did not foreclose the required 40% of the market, they were not illegal under Section 1. This raises the initial question of how much market foreclosure is necessary before an agreement will be considered anticompetitive under Section 1. In addition, how is the Section 1 analysis affected when an agreement or restriction gives a party an advantage over competitors but does not completely exclude them from the market?

The concern about exclusive dealing arrangements is that they foreclose competitors of the supplier from marketing their products. In *Tampa Electric Co. v. Nashville Coal Co.*, 365 U.S. 320, 327 (1961), the Supreme Court stated that exclusive

dealing arrangements are not illegal unless "the performance of the contract will foreclose competition in a substantial share of the line of commerce affected," a standard that has since evolved into the "qualitative substantiality" test, under which courts consider:

(1) the extent to which competition is foreclosed in the relevant market;

(2) the dominance of a seller in its industry;

(3) the relative strength of the parties;

(4) the ease with which new outlets can be formed;

(5) the sales structure of the industry;

(6) the extent to which competition has flourished despite the use of exclusive dealings or requirements contracts; and

(7) the duration for which the arrangements are to run.

1 JULIAN O. VON KALINOWSKI, ANTITRUST LAW AND TRADE REGULATION section 23.02[2], at 23-16 (2d ed. 1999). Of these, the principle criteria courts consider in evaluating reasonableness are the extent of market foreclosure, the duration of exclusive arrangements, and the height of entry barriers. *Concord Boat Corp. v. Brunswick Corp.*, 207 F.3d 1039, 1059 (8th Cir. 2000).

The precise source of the 40% foreclosure threshold established by Judge Jackson is unclear. In making this determination initially, the court relied on *United States v. Dairymen, Inc.*, 758 F.2d 654 (6th Cir. 1985) (unpublished) (50% sufficient); *Sewell Plastics, Inc. v. Coca-Cola Co.*, 720 F. Supp. 1196, 1212-14 (W.D.N.C. 1989) (40% insufficient); and *Oltz v. St. Peter's Community Hospital*, 656 F. Supp. 760 (D. Mont. 1987) (84% sufficient). *See* 1998 WL 6114485, at *19. Each of these cases is cited in the ABA's ANTITRUST LAW DEVELOPMENTS (FOURTH) for the proposition that foreclosure in excess of 30% may be necessary to find exclusive dealing unlawful in the wake of *Jefferson Parish Hospital District No. 2 v. Hyde*, 466 U.S. 2 (1984). ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 223 n.1242 (4th ed. 1997). A threshold in the vicinity of 40% is further borne out by recent case law. *See, e.g.*, *CDC Techs., Inc. v. IDEXX Labs., Inc.*, 186 F.3d 74, 80-81 (2d Cir. 1999) (50% insufficient); *Omega Envtl., Inc. v. Gilbarco, Inc.*, 127 F.3d 1157, 1162 (9th Cir. 1997), *cert. denied*, 119 S. Ct. 46 (1998) (38% insufficient); *(TEX. CIV. APP. — Bldg. Co. v. Northwestern Resources Co.*, 873 F. Supp. 29, 39 (S.D. Tex. 1995) (33% insufficient); *Servicetrends, Inc. v. Siemens Med. Sys., Inc.*, 870 F. Supp. 1042, 1065 (N.D. Ga. 1994) (32-38% insufficient); *Tri-State Rubbish, Inc. v. Waste Management, Inc.*, 875 F. Supp. 8, 13 (D. Me. 1994) (30% insufficient); *see also Minnesota Mining and Mfg. Co. v. Appleton Papers Inc.*, 35 F. Supp.2d 1138, 1140, 1143-44 (D. Minn. 1999) (67% sufficient).

When the arrangements at issue give an advantage over competitors, but do not expressly call for exclusivity, courts appear less inclined to find the arrangements unreasonable, particularly if other evidence shows a lack of actual market foreclosure, or other factors under the qualitative substantiality test support a finding of reasonableness. For example, in *Concord Boat*, plaintiffs challenged defendant's volume discount program, under which boat builders received a discount on all engines purchased "'if they bought a lot of Brunswick engines.'" 207 F.3d at 1058. While acknowledging that this could potentially amount to an exclusive arrangement, the court immediately turned to analytical factors

other than market foreclosure to determine that plaintiffs had failed to prove that the "discount program was in any way exclusive." *Id.* at 1059. The court noted that the program did not commit builders for any specified period of time, and emphasized that there was evidence in the record of builders who had switched from defendant when they received a better price from competitors. *Id.* The court then went on to find that there was little evidence of barriers to entry, again pointing to evidence of new entrants in the market. *Id.*

Moreover, as long as there are alternative avenues to the market, as were available to Netscape via practices such as direct mailing, it's debatable whether any foreclosure has occurred. In *Omega Environmental, Inc. v. Gilbarco, Inc.*, 127 F.3d 1157, 1162-63 (9th Cir. 1997), *cert. denied*, 119 S. Ct. 46 (1998), the court noted that, while defendant had exclusive dealing arrangements with distributors, plaintiff still had open other avenues to reach end-users (including direct marketing). *Id.* "If competitors can reach the ultimate consumers of the product by employing existing or potential alternative channels of distribution, it is unclear whether such restrictions foreclose from competition *any* part of the relevant market." *Id.* at 1163 (emphasis in original). The short duration and easy terminability of the contracts further supported a finding of no substantial foreclosure. *Id.* at 1163-64 That distributors were unlikely to abandon defendant for plaintiff's product was of little concern to the court. *Id.* at 1164

Among the qualitative substantiality factors considered by courts is the extent to which competition has flourished despite the use of exclusive dealing arrangements. For example, in *Omega Environmental*, the court turned to evidence of increasing competition in the marketplace to support its determination that plaintiff had failed to prove substantial foreclosure. *Id.* at 1164. Often, however, evidence of the actual effect on competition in the market has been ignored by the courts. *See* VON KALINOWSKI section 23.02[2][c], at 23-26. This trend may have its roots in *Standard Stations*, in which the defendant had argued that its position in the market was not improved during the period in which its requirements contracts were in effect. *Standard Oil Co. v. United States*, 337 U.S. 293 (1949). The Supreme Court held that this did not preclude a finding of probable anticompetitive effect, given that defendant might not have been able to maintain its position had the requirements contracts not been used. *Id.* at 314.

In sum, arrangements that call for "soft" exclusivity appear more likely to be found reasonable if they leave some (even inefficient) avenues open to competitors. If the record indicates viable competition in the market, a finding of reasonableness is even more likely.

Questions of Law: What Is the Appropriate Role of Intent in Antitrust Analysis?

Virtually every antitrust case has the "bad document." The *Microsoft* case had many of them. While it is clear that intent alone is not sufficient to trigger the antitrust laws, the *Microsoft* case presents the role of intent dramatically. It seems rather clear that without the extensive history of e-mails and memoranda detailing why Microsoft was taking the actions that it took, the conclusion that it had acted anticompetitively would have been far harder to sustain. Judge Jackson's use of evidence of intent is, however, consistent with established law that intent can inform other relevant facts.

Questions of Law: If Consumers Are Happy, Should Antitrust Enforcers Care? Stated Differently, How Important Is Economic Performance?

One of Microsoft's and its supporters' strongest arguments is that the computer industry is the paradigm of a competitive industry that has continually provided consumers

with ever greater computing power at ever diminishing cost. In other words, the market is performing just the way one would want it to.

This argument presents the legal issue of how important market performance is. That is, assume that a company has monopoly power and assume that it has engaged in monopolizing conduct. If it nevertheless performs at or near the level that one would expect of a competitive industry, should the antitrust laws be applied? While interesting in the abstract, this question is fraught with difficult factual questions. One is unlikely to have the ability to say confidently whether the necessary conditions are present.

There were facts developed during the trial that would at least suggest that Microsoft's factual premise is incorrect. Microsoft arguably is trying to take credit for dramatic price decreases in PC computers, a market segment that is intensely competitive and where the margins are razor thin. Although it is difficult to make comparisons across time because of the increased content and sophistication of the operating system, Microsoft's prices arguably have not fallen at anything like the rate of the computer hardware. To the contrary, they arguably have risen.

Questions of Law: If the Government is right, what do you do about it?
What Does It Take to Justify Tearing a Successful Company Apart?

The issue in the *Microsoft* case that most energizes commentators, both antitrust experts and others, is the issue of remedy. Many people are understandably concerned at the prospect of one of the most successful companies in the current economy being dismembered under the watchful eye of a federal court.

It is clearly true that the allocative efficiencies that are lost as a result of the exercise of monopoly power are relatively minor compared to the effects of enhanced innovation in the economy. Therefore, if one believed that a divestiture order would have the effect of significantly impairing the resulting company's level of innovation, there would be a legitimate argument that the net effect would be counterproductive. There are, however, several counter considerations. First, there is a legitimate argument that Microsoft's practices have had the effect of stifling innovations that might have occurred had Microsoft not been in a position to take the actions that it took to protect its operating system monopoly. Second, if properly done (admittedly a significant qualification), divestiture need not impair innovation. While innovation does require substantial amounts of money for investment in the R&D process, there is no reason to believe that only a monopolist can succeed in innovating.

Perhaps the more significant issue is the extent to which an antitrust remedy can be fashioned without involving the court system in continuing regulation. There is a valid argument that, other things being equal, a divestiture that can be done once and for all is a cleaner and more procompetitive type of remedy than a so-called "conduct remedy" that requires continuing supervision and involvement by the court.

For Microsoft and the industry, questions of remedy may be more important than questions of liability. The prayer for relief in the Government's complaint is as interesting for what it does not say as what it does. The Government sought injunctive relief against the actions challenged as illegal conduct and, without further elaboration, "such additional relief" as the Court may find "just and proper." In this context (where divestiture looms as a possible remedy should the Government prevail), that standard phrase in the prayer may be where the most significant action is.

An important legal issue may control the ultimate result. There is little doubt that Microsoft's monopoly pre-dated any of the conduct challenged in the case. In fact, it is unlikely that browsers would have had any of the beneficial effects projected by the Government by now even if the conduct had never occurred. The issue therefore is the extent to which a court can take actions to eliminate monopoly power to a greater extent than would have existed in the absence of the challenged conduct. That is, does a monopolist expose itself to the full elimination of its monopoly because it committed *any* violation of Section 2, or is there an element of proportionality that limits the Court's equitable discretion? In order to attack the underlying monopoly, must the Government show that, but for the challenged conduct, the power would have dissipated? The issue is far from clear, but there are numerous sweeping statements in early cases that should give Microsoft pause about what might happen in the event that it loses.

The divestiture ordered by the District Court has the advantage of seeming relatively simple and clear in the resulting division. One obvious problem, however, is that it does not eliminate the monopoly over operating systems. Indeed, the division seems more appropriate to a theory of monopoly leveraging from the operating system to the applications, but that theory was rejected on summary judgment.

The scope of the proposed remedies poses the ultimate hard question even for those who believe that Microsoft has monopoly power and has engaged in exclusionary actions to keep it. When is the cure worse than the disease?

GLOSSARY

OEM	original equipment computer manufacturer (*e.g.*, Compaq)
IAP	Internet access provider
OLS	online service provider (a type of IAP; *e.g.*, AOL)
ISP	Internet service provider (a type of IAP; *e.g.*, Mindspring)
HTML	Hypertext Markup Language (language by which Internet "pages" are accessible)
ISV	independent software vendor (who makes "applications" — programs)
OS	operating system
API	application programming interfaces (through which the application interfaces with the OS)
browser	specialized software program that allows a PC ("personal computer") to locate, access, and display content and applications on the Web by "translating" HTML into a usable format
Java	programming language that permits applications written in it to run on any platform or OS, thus permitting ISVs to create and distribute a single, "across platform" version of their of their program
ICP	Internet content provider (*e.g.*, CBS Sportsline)
CPU	central processing unit of a PC