COMPETITIVE PROCESSES, ANTICOMPETITIVE PRACTICES AND CONSUMER HARM IN THE SOFTWARE INDUSTRY:

AN ANALYSIS OF THE INADEQUACIES OF THE MICROSOFT-DEPARTMENT OF JUSTICE PROPOSED FINAL JUDGMENT

United States v. Microsoft Corp., Civil No. 98-1232
before Judge Colleen Kollar-Kotelly of the
U.S. District Court for the District of Columbia

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I. EXECUTIVE SUMMARY

THE MICROSOFT-DOJ PROPOSED FINAL JUDGMENT IS NOT IN THE PUBLIC INTEREST

We find the Microsoft-Department of Justice final judgment proposal to be fundamentally flawed. By explaining the nature of competition in the software industry and describing Micorosoft's persistent, repeated pattern of anticompetive conduct this analysis shows that the Microsoft-DOJ Proposed Final Judgement (PFJ) fails to protect the public interest. It is as an entirely inadequate remedy to the sustained, egregious, illegal conduct engaged in by Microsoft to thwart competition in the software industry and protect and enhance its own monopolies. Because it fails to protect consumers, it fails to serve the public interest. It should be rejected by the District Court.

The Tunney Act requires the Court to determine whether the Microsoft-DOJ proposal is in the "public interest." To make that determination the Court *must*— consider the competitive impact of the proposal, including:

- termination of alleged violations and prevention of future monopolization,
- provisions for enforcement and modification,
- duration or relief sought,
- anticipated effects of alternative remedies actually considered, and
- any other considerations bearing upon the adequacy of such judgment.

There is no need to accept a grossly inadequate quick fix when a strong, workable alternative remedy, advanced by the state attorneys general who continue to aggressively pursue the case, already has been submitted to the court for review.

THE PUBLIC INTEREST TEST REQUIRES THAT FINAL JUDGMENT PROTECTS CONSUMERS

Individual consumers, largely overlooked in this antitrust proceeding, ultimately pay — both directly and indirectly— for a continuation of the Microsoft monopoly. Any remedy endorsed by the Court needs to benefit consumers by restoring competition in those segments of the software industry that Microsoft has monopolized or is in danger of monopolizing. We acknowledge that, considering Microsoft's long-standing unfair business practices and deeply entrenched monopoly, such a task will not be easy. It is because of these same factors, however, that it is necessary.

THE SOFTWARE INDUSTRY IS RIPE FOR COMPETITION AND DOES NOT LEND ITSELF NATURALLY TO MONOPOLY

The analysis rejects claims that the software industry is prone to natural monopoly. Were that the case, Microsoft would not have had to engage in its systematically anti-competitive practices to maintain and extend its monopolies. The trial record and reams of trade press

accounts bear testimony to the unnatural acts embraced by Microsoft to create and protect its monopoly power over the years. These include leveraging the Windows operating system, slowing or stopping its own deployment cycle, denying access to application interfaces, threatening to deny access to its operating system, threatening to stop developing software for competing platforms, bloating the operating system with unnecessary functionality, hiding prices in whole computer configurations, compelling original equipment manufacturers (OEMs) to use its browser, reaching pacts with other companies to deny the use of alternative browsers, and on and on.

In our view, the software industry is ripe for competition. Competition would yield an explosion of innovation and consumer convenience. Consumers care about applications, not about operating systems. Furthermore, most consumers are inclined to invest time and money in functional applications that they reasonably feel will endure, be supported, and work compatibility with other programs and their hardware. Independent vendors are interested, therefore, in creating products that match consumer expectations.

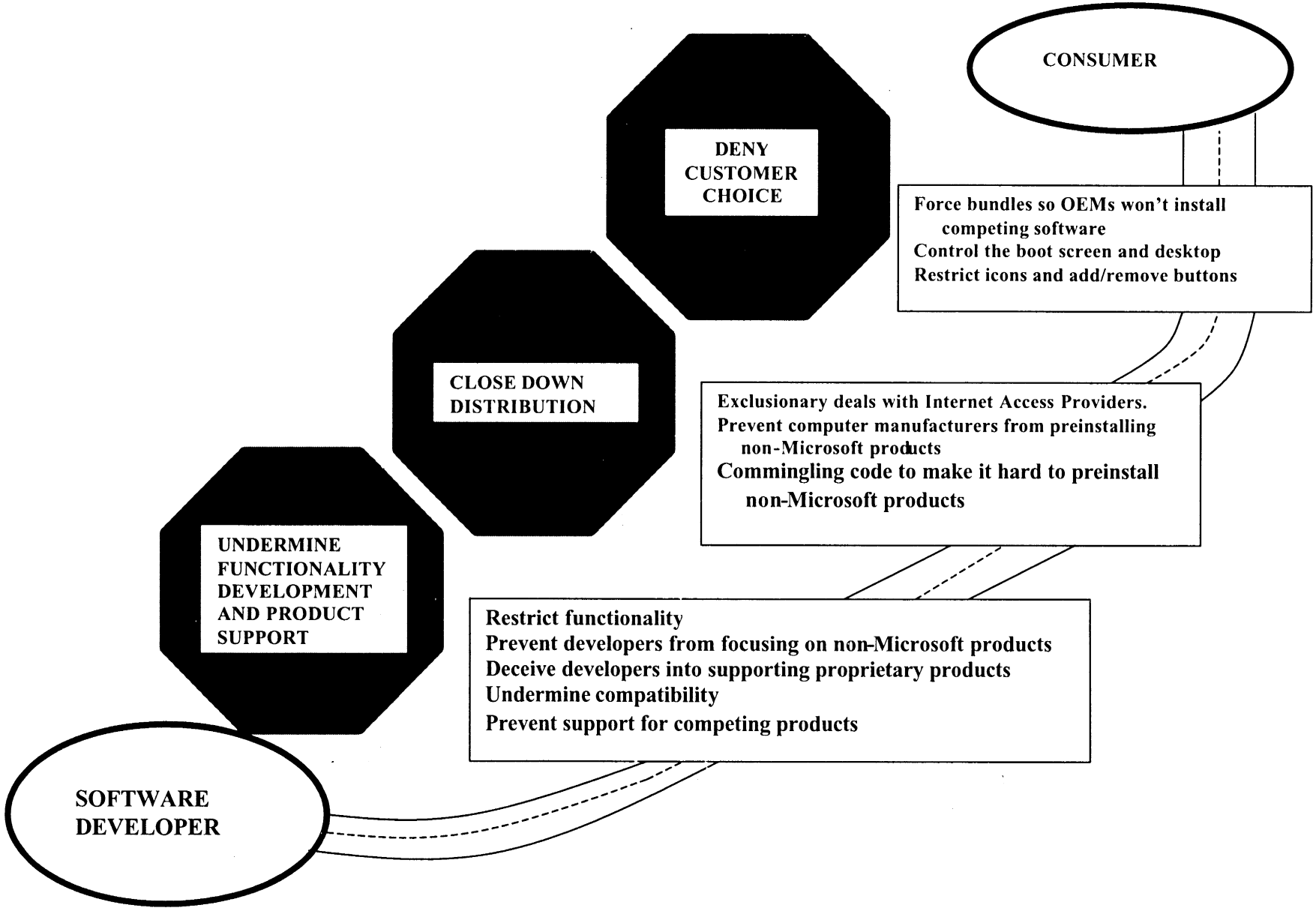
With the entrenched Microsoft monopoly, independent developers confront an applications barrier—Microsoft has such a significant lock on the computer platform and on applications used, that many developers are dissuaded from producing new products. Should the Microsoft monopoly be broken down, developers would look to create compatible, consumer-friendly products. In fact, that is what Netscape and Sun attempted to do with Navigator and Java—create software, known as "middleware" because they insert themselves between the operating system and applications running on top of the middleware. Because Netscape/Java were compatible across systems, they threatened Microsoft's control over the consumer. Microsoft's reaction was to crush Netscape and undermine Java.

Because Microsoft illegally undertook to prevent competition, consumers were left with products that did not honestly earn their place in the marketplace. Microsoft products have not been disciplined for price and quality by competitors because of the company's anti-competitive practices. Remove the monopoly, and an avalanche of competition —aiming towards operable standards, innovative products, and better pricing— will be unleashed. Such developments would provide undeniable benefit to consumers. The software market will support, and therefore the public interest demands, actual competition within and between markets.

MICROSOFT'S DEEP-ROOTED ANTI-COMPETITIVE BUSINESS MODEL POSES A CONTINUAL THREAT TO COMPETITION

Detailing Microsoft's anti-competitive business model is a nearly interminable task, though it was accomplished well by the District Court in its *Findings of Fact*, virtually all of which were upheld on appeal. The list of corporate victims is long, and includes not just Netscape and Sun, but also IBM, Intel, and Apple. Figure ES-1 summarizes in simple terms the barriers to competition that Microsoft has repeatedly erected. We reiterate that the Department of Justice and the Court should not lose sight of the fact that such practices ultimately negatively impact individual consumers, in the forms of higher prices, reduced choice, and inferior products and service.

FIGURE ES-1: HOW MICROSOFT STOPS COMPETITION AND HARMS CONSUMERS



CONSUMERS ARE HARMED BY MICROSOFT'S ABUSE OF MARKET POWER

Indeed, Microsoft's practices, which the Microsoft-DOJ proposal fails to correct, harm consumers both qualitatively and monetarily. The harms are sufficiently great to require that the Court avoid a "quick fix." It is much more important to devote a reasonable amount of time to get the final judgment right and protect consumers.

Microsoft's anticompetitive practices deny consumers choice. Microsoft strictly forces computer manufacturers to buy one bundle with all of its programs preloaded and biases the screen location, start sequences and default options. As a result, it becomes substantially difficult to choose non-Microsoft products. Products tailored to meet individual consumer needs (consumer friendly configurations, small bundles) are unavailable and eventually competing products disappear from the market. Further, by foreclosing the primary channels of distribution with exclusive contracts and other deals, Microsoft forces consumers of non-Microsoft products to acquire them in time-consuming and inconvenient ways.

Microsoft's practices impair quality and innovation. Because of Microsoft's leveraging of the operating system, superior products are delayed or driven from the marketplace. The Court noted at least six instances in which Microsoft sought to delay the development of competing products. It noted as well several instances in which it delayed the delivery of its own products to accomplish an anti-competitive purpose. Resources are denied to and investment is chilled in competing products, slowing advances in technology and rendering some libraries of content obsolete. In addition, in several instances the Court found that Microsoft had undermined the ability of software applications or middleware to function properly with the Windows operating system. Thus, Microsoft has been quite willing to undermine the quality of its own and of competing products to preserve its market dominance.

In addition to qualitative harm, consumers have suffered monetary harm. The historical behavior of prices makes it possible to draw a direct line between competition and lower prices. Eliminating competition as Microsoft has, results in higher prices. The fact that the excess price results from a failure to pass cost reductions through to consumers does not change the fact that consumers are overcharged. Nor does the fact that consumers do not pay for the software directly. In fact, there was a substantial increase in the price of Microsoft products in the 1990s that consumers paid in the price of the PCs they purchased. Of course, consumers pay directly in the case of upgrades and for applications.

The centerpiece of Microsoft's pricing strategy has been to increase operating system prices while other components of the delivered PC bundle have fallen. Evidence at trial gave explicit estimates of the price of operating systems. The average preinstalled price is given as $19 in 1990 and over $49 in 1996. Microsoft recognizes that it has been the beneficiary of volume growth created by the falling price of the PC, which masks its increasing prices. Thus, one of the key elements in Microsoft's business model is to bury its products in bundles. This hides the price from the public and allows Microsoft to hide behind the declining price of the total package.

The Consumer Federation of America has estimated that in the five years between the start of the anticompetitive attack on the browser in 1995 and the District Court finding of liability, Microsoft overcharged consumers by about $20 billion. The economic analysis of other experts suggests overcharges of as much as $30 billion.

In addition to direct monetary costs, indirect monetary costs of the Microsoft monopoly also present themselves. Though difficult to calculate, they are no less significant, and demand to be considered. Consumers, individual and corporate, have undoubtedly lost hundreds of millions of dollars due to such issues as training, rapid upgrade cycles, software crashes, bloated bundles, debugging, service, and hardware upgrades.

WINDOWS XP/.NET, LEFT UNCHECKED, ENHANCES AND EXPANDS THE MICROSOFT MONOPOLY

Microsoft's brazen disrespect for the antitrust laws is nowhere more readily apparent than in the design of its newest bundle of products ("Windows XP," and the ".NET" initiative, hereafter referred to as "Windows XP/.NET"). The product is so blatantly at odds with the Court's ruling Microsoft must have designed it on the mistaken assumption that Microsoft would prevail in its appeal.

The extreme reliance of "Windows XP/.NET" on a huge bundle of entire applications and the continued reliance on contractual and technological bundling fly in the face of the Court's cautionary words. Windows XP and the .NET initiative are a bundle of services bolted together by technological links (code embedded in the operating system), contractual requirements, and marketing leverage.

The software, applications, and services that Microsoft has bundled cover all of the functionalities that are converging on the Internet, including communications, commerce, applications, and service. Today these Internet activities are vigorously competitive, just as the browser was before Microsoft launched its attack against Netscape. In other words, the anticompetitive and illegal business practices Microsoft used to win the browser war are being extended to virtually every other application that consumers use. The bundle is built on commingled code, proprietary languages, and exclusive functionalities that are promoted by restrictive licenses, refusal to support competing applications, embedded links, and deceptive messages. A strong remedy, unlike the weak one proposed by Microsoft and the Justice Department, is needed before Microsoft becomes the monopolist of virtually all computer and Internet applications.

THE PROPOSED FINAL JUDGMENT FAILS TO PROTECT INDEPENDENT SOFTWARE DEVELOPERS, COMPUTER MANUFACTURERS, AND CONSUMERS

The history of the case and our analysis of the software industry show that in order for new software to have a fair chance to compete, the remedy must:

- create an environment in which independent software vendors and alternative platform developers are free to develop products that compete with Windows and with other Microsoft products,
- free computer manufacturers to install these products without fear of retaliation, and
- enable consumers to choose among them with equal ease as with Microsoft products.

The Microsoft-Department of Justice settlement is an abysmal failure at all three levels and will not deter Microsoft from continuing its anticompetitive business practices.

Independent software vendors and competing platform developers will get little relief from Microsoft's continual practice of hiding and manipulating interfaces. Microsoft has the unreviewable ability under the proposed settlement to define Windows itself. It therefore controls whether and how independent software developers will be able to write programs that run on top of the operating system. The definitions of software products and functionalities and the decisions about how to configure applications programming interfaces (APIs) are left in the hands of Microsoft to an extreme extent. As a consequence, the company will be encouraged to embed critical technical specifications deeply into the operating system and thereby prevent independent software developers from seeing them. To the extent that Microsoft would actually be required to reveal anything, it would be so late in the product development cycle that independent software developers would never be able to catch up to Microsoft's favored developers.

Furthermore, the Court of Appeals recognized that the Microsoft monopoly is protected by a large barrier to entry, as many crucial applications are available only for Windows. The proposed settlement does nothing to eliminate this "applications barrier to entry," such as by requiring the porting of Microsoft Office to other PC platforms. Rather than restore competition, the Microsoft-DOJ proposal all but legalizes Microsoft's previous anticompetitive strategy and institutionalizes the Windows monopoly.

The Microsoft-DOJ proposed final judgment (PFJ) does not shield computer manufacturers from Microsoft retaliation. The restriction on retaliation against computer manufacturers leaves so many loopholes that any OEM who actually offended Microsoft's wishes would be committing commercial suicide. Microsoft is given free reign to favor some, at the expense of others, through incentives and joint ventures. It is free to withhold access to its other two monopolies (the browser and Microsoft Office) as an inducement to favor the applications that Microsoft is targeting at new markets, inviting a repeat of the fiasco in the browser wars. Retaliation in any way, shape, fit, form, or fashion should be illegal. Any adequate remedy, unlike the Microsoft-DOJ proposal, must include a prohibition on retaliation that specifically identifies price and non-price discrimination, as well as applying to all monopoly products.

Because the proposed settlement requires no removal of applications, only the hiding of icons, Microsoft preserves the ability to neuter consumer choice. The boot screen and desktop remain entirely tilted against competition. Microsoft retains the ability to be the pervasive

default option and is allowed to harass consumers who switch to non-Microsoft applications. Furthermore, it still gets to sweep third party applications off the desktop, forcing consumers to choose them over and over.

GIVEN MICROSOFT'S PAST BEHAVIOR, ENFORCEMENT MUST BE SWIFT WITH SUBSTANTIAL SANCTIONS FOR NON-COMPLIANCE, BUT THE PFJ PROVIDES NO SUCH MECHANISMS

After the District Court identifies remedies that can address these problems, it must enforce them swiftly and aggressively. Microsoft has shown —through a decade of investigations, consent decrees and litigation— that it will not easily be deterred from defending and extending its monopoly. Microsoft behaves as though it believes it has the right to do anything to eradicate competition. Every one of the illegal acts that led to the District Court findings of liability, unanimously upheld on appeal, took place *after* Microsoft signed its last consent decree.

With three monopolies to use against its potential competitors (the Windows operating system, the Internet Explorer browser, and Office in desktop applications), enforcement must be swift and sure, or competition will never have a chance to take root. The proposed settlement offers virtually nothing in this regard. The technical committee set up to (maybe) hear complaints can be easily tied up in knots by Microsoft because of the vague language that creates it. Because of the delay in its implementation, the key element of access to APIs would be in place for as little as four years. If Microsoft violates the settlement, nothing happens to the company, except that it must "endure" the annoyance of this weak settlement for two additional years.

Virtually every specific measure of the proposed settlement is either riddled with ambiguities or put under the sole discretion of Microsoft. In other words, Microsoft defines its own sanctions. The Department of Justice and the Court must not forget that independent software vendors were the targets of Microsoft's campaign and that the competitive process in the software market was its victim. When we review the question of whether the proposed settlement will lift the yoke of anticompetitive practices from this market, we find that it will not (see Figure ES-2). Under the proposed settlement, Microsoft preserves immense market power and discretion. The settlement cannot work to restore competition because independent software developers will not be freed to produce software products in a competitively neutral environment. As a result, consumers will continue to suffer at the hands of the Microsoft monopolies. The proposed settlement does not serve the public interest and must be rejected.

FIGURE ES-2: SOFTWARE COMPETITION WILL NOT BE RESTORED BECAUSE THE SETTLEMENT DOES NOT CREATE A LEVEL PLAYING FIELD FOR INDEPENDENT SOFTWARE VENDORS

DO I HAVE A FAIR CHANCE TO HAVE CONSUMERS USE MY PRODUCT?
Consumers have to choose my software twice to get my icon on the screen.
Consumers never have to choose Microsoft's; it's still the default.
Microsoft can sweep my icon off the system every 14 days.

WILL OEMs PUT MY PRODUCT ON THE PC?
Microsoft's code is guaranteed to be in every PC, only its icons are removed.
My code gets into only those PCs that I convince OEMs to install.
Microsoft can still give OEMs "considerations" to promote its product.
Microsoft can engage in Joint Ventures and prevent OEMs from using mine.
Microsoft can leverage its monopoly applications to keep my products out.

WHAT APIs DO I GET TO SEE?
Only APIs for products Microsoft has already developed.
Only APIs that Microsoft has decided not to move into the operating system.
Only APIs that Microsoft decides do not compromise its piracy, virus, licensing, digital rights management, encryption or authentication systems.

WHEN DO I GET TO SEE THE APIs?
Very late in the process, after Microsoft has had a huge head start in developing its products.
Only after Microsoft ships a fix, up until a year from now.

WHAT DO I HAVE TO DO TO SEE THE APIs?
License my software to Microsoft.
Convince Microsoft my planned product is reasonable.
Let Microsoft decide if I have a viable business.
Let Microsoft review and certify my product before I ship it.

II. THE PROPOSED FINAL JUDGMENT IS NOT IN THE PUBLIC INTEREST

1. RESTORATION OF COMPETITION DEFINES THE PUBLIC INTEREST

In order to ascertain whether the Microsoft-DOJ Proposed Final Judgment (PFJ) is in the public interest, the District Court must answer two interrelated questions: Does it effectively address the anticompetitive problem identified at trial? Will it help the consumer? The questions are interrelated because, as the Court of Appeals noted, the antitrust laws are founded upon, and a transgression of the antitrust laws is assumed to violate, a close, direct relationship between competition and consumer welfare.

> From a century of case law on monopolization under section 2 ... several principles do emerge. First, to be condemned as exclusionary, a monopolist's act must have an "anticompetitive effect." That is, it must harm the competitive *process* and thereby harm consumers. In contrast, harm to one or more *competitors* will not suffice.[1]

Moreover, because this case has been litigated and upheld on appeal, a remedy that only "improves" the situation is not in the public interest. The remedy must faithfully execute the purpose of the antitrust laws: it must restore competition and prevent further abuse. The remedy must provide a proper and full resolution of the transgression. Again, the words of the Court of Appeals are instructive. Even in remanding the remedy, it reminded the District Court of the strict standards set by the Supreme Court for rectification of a violation of the Sherman Act.

> The Supreme Court has explained that a remedies decree in an antitrust case must seek to 'unfetter a market from anticompetitive conduct,' *Ford Motor Co.*, 405 U.S. at 577, to 'terminate the illegal monopoly, deny to the defendant the fruits of its statutory violation, and ensure that there remain no practices likely to result in monopolization in the future,' *United States v. United Shoe Mach. Corp.*, 391

[1] *U.S. v. Microsoft*, 253 F.3d 34, 103 (D.C. Cir. 2001)(*en banc*) (hereafter, *En banc*).

U.S. 244, 250 (1968); *see also United States v. Grinnell Corp.,* 384 U.S. 563, 577 (1966).[2]

Because the case was fully litigated, the District Court has a clear and precise depiction of the transgressions. The claim by Microsoft and others that the court record will not support a strong remedy is simply wrong. The Court of Appeals reaffirmed the charge of monopolization with a unanimous, *en banc* ruling. It explicitly affirmed Microsoft's liability under Section 2 of the Sherman Act, the vast bulk of the specific conduct challenged by the Department of Justice, *and nearly every one of the trial court's hundreds of factual findings.* As a result, it held a broad array of anticompetitive Microsoft practices to be illegal, constituting a massive violation of the antitrust law. Exhibit II-1 identifies those anticompetitive practices that were directly linked to the violations of law.

Despite this clear court mandate, the PFJ fails miserably to resolve these problems. It does not address the underlying anticompetitive problem and, therefore, it will not promote consumer welfare.

2. A LONG HISTORY OF ANTICOMPETITIVE CONDUCT DEFINES THE SIZE OF THE TASK

Because this is the third time that Microsoft has appeared before the District Court on similar and related matters, the Court has substantial experience with which to judge whether the enforcement mechanisms are adequate to elicit the appropriate responses from Microsoft. The Court cannot assume that Microsoft will behave; it has already been convicted of misbehaving. Moreover, all of the acts judged illegal in this proceeding took place *after* Microsoft had signed a

[2] *U.S. v. Microsoft*, 253 F.3d 34, 26 (D.C. Cir. 2001)(*en banc*).

EXHIBIT II-1

ABUSIVE BUSINESS PRACTICES IDENTIFIED IN THE FINDINGS OF FACT AND CONCLUSIONS OF LAW UPHELD BY THE APPEALS COURT

Anticompetitive Conditions/Practices	Findings Of Fact (Paragraph No.)	Conclusions Of Law (Page No.)
Monopoly Position	18-21,33-35	4,5
Barriers To Entry		
Hardware	19,22-27, 54-55	4,6
Software	30,36-43,141,166	4,5,6
Abrogation Of Contracts	390,394	18
Intimidation	106,129,236,355	6,10
Market Division	88,105	10,22
Bounty	139,260,295	16,20
Predation	107, 147	6,10,16,21,22
Bundling		
Os Tying	159, 170,198	4,11,12,31
Imitation	133-134,166	10,18,19,22
Contract Provisions		
Exclusive Deals	143,147,230-234,247 259-260,287-290,293-297 305-306,317-321 326-326,332,337 339-340,350-352	10,15,37,38
Preferred Desktop Location	139,272,301	17,20
Secret Price	64,118,236-238,324	6,10,11
Indirect Sales	10,19,103	4,6,10
Quality Impairment	90-92,128-129,160, 330,339-340	6,11
Resource Denial	240,357,379,396-406	31
Disabling	160,170-172	11,31,32
Desupporting	90,122,128-129, 192,405-406	10,18
Deny Consumers User-Friendly	210-216	11
Thwart Responses to Consumer Demand	225-229	11,14
Impair the Functionality of Non-Microsoft Products	92,128-129, 160,171-172, 330,339,340	6,10,11,17,32

prior consent decree. While we cannot call the company a repeat offender (since prior disputes ended in a settlement before trial), we can say that it has a tendency to push the limits of, and haggle over its obligations under, the law—as evidenced in numerous court cases with both private and public parties. It is evident therefore that effective enforcement is the key to ensuring that consumers will benefit from the restoration of competition in the industry. Enforcement as contemplated by the proposed settlement is weak and ineffective, and would deny consumers effective competition.

In short, the PFJ fails to address the underlying problem in an effective manner and will not significantly benefit consumers. The Court should find that it is not in the public interest. The settling plaintiffs should be ordered to renegotiate or rejoin the ongoing litigation.

A number of procedural questions also surround the development of the PFJ. These include a sharp about face by the Department of Justice as well as Microsoft's attempt to hide a number of meetings between its representatives and government officials, among others, that raise questions about the propriety of the process by which the PFJ was crafted. Though these acts cast further doubt on the PFJ, these comments focus on the substantive issues before the Court.

3. ROADMAP TO THE COMMENTS

In order to appreciate the gross inadequacy of the PFJ, this analysis addresses the two central issues before the Court. First, it demonstrates why competition is in the public interest by showing how Microsoft's anticompetitive business model has frustrated competition and hurt consumers. Second, it demonstrates why the PFJ is inadequate to restore competition, protect consumers, and promote the public interest.

Section III explains why the claim that monopoly is the "natural" state of affairs in the software industry should be rejected.

Section IV discusses the complex competitive processes in the software industry that must be restored to promote the public interest. The Court must understand how the competition works in order to restore it.

Section V describes Microsoft's anticompetitive model as determined by the Court. These are the offensive practices that must be terminated if Final Judgment in this case is to serve the public interest.

Section VI looks to the trade, economic, and popular press for other examples of anticompetitive conduct that stretch even farther back in time, and which show how deeply these business practices are embedded in Microsoft's DNA. It brings additional examples to bear from a longer period of time to remind the Court of the deep seated nature of these business practices. The Court can and should look backward to gain a better understanding of what must be done to effectively terminate anticompetitive practices in the future.

Section VII presents a discussion of the past consumer harm inflicted by Microsoft's anticompetitive model. These are the stakes for consumers. Estimating these costs demonstrates that settling for a quick, inadequate fix is not in the public interest.

Eliminating anticompetitive practices that give rise to consumer harm is a forward looking process. The Court may look backward for instruction, it take steps "to ensure that there remain no practices likely to result in monopolization. As the Court of Appeals noted, the remedy must prevent the recurrence of the monopoly. Section VIII presents our concerns about the latest generation of Microsoft's software and services bundles (i.e., Windows XP/.NET).

After examining the examples of actual and nascent competition that Microsoft has snuffed out with its anticompetitive practices, we conclude in Section IX that competition is in the public interest. Consumers do not have to settle for monopolists who claim to be competing for the whole market. The market will support, and therefore the public interest demands, actual competition within and between markets.

With a thorough understanding of the nature and magnitude of the anticompetitive problem, the final two chapters demonstrated that the PFJ is totally inadequate to restore competition and protect the public interest.

Section X presents a general discussion of the weaknesses of the PFJ in four areas, enforcement, computer manufacturer protections, independent software vendor protections, and provisions for consumer choice.

Section XI presents a detailed critique of the PFJ, demonstrating that it does not create a level playing field for independent software developers, who are the key competitors who Microsoft has repeatedly attacked. Since it will not restore the competitive process in the industry, consumers will not benefit from the settlement.

Section XII notes that the court already has before it a far superior set of remedies – the litigating states remedial proposals.[3]

[3] *Plaintiff Litigating States' Remedial Proposals,* United States of America v. Microsoft Corporation, State of New York, *et al.,* v. Microsoft, Civil Action Nos. 998-1232 (CKK0, 98-1233 (CKK), December 7, 2001.

III. MONOPOLY IS THE WRONG MODEL FOR THE SOFTWARE MARKET

What should the software market look like? Does the Court of Appeals' ruling provide an adequate legal foundation for creating that market? Is it worth the effort? What specific remedies are necessary to get the job done?

Our analysis of the Microsoft case over four years leads us to clear answers.[4] We reject the claim that consumers must accept monopoly in the software industry. Real competition can work in the software market, but it will never get a chance if Microsoft is not compelled to abandon the pervasive pattern of anticompetitive practices it has used to dominate product line after product line. The antitrust case has revealed a massive violation of the antitrust laws. A unanimous decision of the Court of Appeals points the way to restoring competition. The public interest demands that we try.

1. MICROSOFT'S IS AN UNNATURAL MONOPOLY PRESERVED BY ANTICOMPETITIVE ACTS

The defenders of the Microsoft monopoly say that consumers cannot hope for competition within software markets because this is a "winner-take-all," new economy industry. They claim that in this product space companies always win the whole market or most of it, so anything goes. In fact, Microsoft's expert witness has written in a scholarly journal that:

[4] The Consumer Case Against Microsoft (October 1998); The Consumer Cost of the Microsoft Monopoly: $10 Billion and Counting (January 1999); Economic Evidence in the Antitrust Trial: The Microsoft Defense Stumbles Over the Facts (March 18, 1999); Facts Law and Antirust Remedies: Time for Microsoft to be Held Accountable for its Monopoly Abuses (May 2000); Mark Cooper, "Antitrust as Consumer Protection in the New Economy: Lessons from the Microsoft Case," Hasting Law Journal, 52 (April 2001); Windows XP/.NET: Microsoft's Expanding Monopoly, How it Can Harm Consumers and What the Courts Must Do to Preserve Competition (September 26, 2001).

> With "winner take most" markets... [If] there can be only one healthy survivor, the incumbent market leader must exclude its competition or die... There is no useful non-exclusion baseline, which the traditional test for predation requires...
>
> As to intent, in a struggle for survival that will have only one winner, any firm must exclude rivals to survive.... In a winner take most market, evidence that A intends to kill B merely confirms A's desire to survive.[5]

By that standard, if a monopolist burns down the facilities of a potential competitor, it might be guilty of arson and other civil crimes, but it would not be guilty of violating the antitrust laws. Consumers should be thankful that both the trial court and the Court of Appeals flatly rejected this theory of the inevitability of monopoly and upheld the century old standard of competition.[6]

The evidence at trial teaches us that software markets are ripe for competition. If a monopoly were really the natural state of affairs in this market, then Microsoft would not have engaged in so many unnatural acts to preserve it. Microsoft resorted to repeated, well-documented and protracted campaigns of anti-competitive behaviors to quash its competition. If network externalities would have been sufficient to entrench Microsoft, the immense amount of managerial time and effort and the hundreds of millions, if not billions, of dollars it burned up foreclosing the market to competing products were wasted.[7] It should not have needed to use all of these illegal business strategies. Rather, it could have relied simply on delivering a better product in a networked industry.

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[5] Richard Schmalensee, "Antitrust Issues in Schumpeterian Industries," 90 *American Economic Review* 192-194 (2000).

[6] *En banc*, at 11-13.

[7] United States v. Microsoft Corp., 84 F. Supp. 2d 9 52-57 (D.D.C. 1999) (Hereafter, *Findings*, references are to paragraphs). United States v. Microsoft Corp., 87 F. Supp. 2d 30 25 (D.D.C. 2000) (Hereafter, *Conclusions)*.

2. MICROSOFT'S CONDUCT DOES NOT HELP THE PUBLIC AND IT HARMS COMPETITION

The trial also showed that Microsoft's claims to pursuing consumer friendly business tactics that serve the public were contradicted by its actions. If expanding demand for Windows by promoting a complementary product had been Microsoft's concern, it would not have had to spend hundreds of millions of dollars making sure the dominant browser was Explorer and not Netscape Navigator. Since innovation would be the key to any such "system" effects, Microsoft should never have slowed its own products or prevented other products from getting to market, since all innovation stimulates demand for Windows. Microsoft should not have cared which brand was used. It should certainly not have spent so much effort on forcing Navigator out of the Apple Macintosh market.

If bundling were important to expanding demand by creating convenience and lowering costs, Microsoft should not have cared which complements were bundled, since the better they all worked, the greater the demand. Yet it repeatedly sought to prevent any product, other than its own, from being bundled on new PCs. If improved functionality and ease of use through integration of complementary products were critical to stimulating demand, Microsoft should never have threatened to or actually withheld access to interfaces or jolted non-Microsoft products since they needed to function well to expand demand.

If Microsoft were seeking to increase revenues by steering customers through its browser to its portal, it should never have given AOL equal standing with MSN on the boot screen at no charge or allowed OEMs to direct customers to their portals provided they used Explorer, not Navigator.

If a pleasing consumer experience were important to expanding demand, Microsoft would have heeded the entreaties of OEMs to simplify and modify boot sequences, when they faced the wrath of dissatisfied consumers. Instead it payed them to put up with consumer hassles. It would not have compromised the stability of the operating system with excessive integration.

Microsoft illegally eliminated competition to defend and extend its monopoly and imposed a heavy price on the public. Consequently, application of traditional antitrust rules will achieve exactly the reverse of what Microsoft claims it would—it will promote innovation by allowing potential competitors, who would otherwise be quickly eliminated by the giant's anti-competitive behaviors, to have a fair chance to enter the market and eventually discipline the price and the quality of Microsoft products.

In fact, the products against which Microsoft has directed its most violent anticompetitive attacks represent the best form of traditional competition: compatible products that operate on top of existing platforms and which seek to gain market share by enhancing functionality and expanding consumer choice. Microsoft fears these products and seeks to destroy them, not compete against them, precisely because they represent uncontrolled compatibility, rampant interoperability and, over the long-term, potential alternatives to the Windows operating system

These examples illustrate how Microsoft's behavior hurts the public and undercut its claim that it was not abusing market power. They remind us that the link between competition and consumer welfare is more complex in this industry than in many others because of its network characteristics and its platform nature. As the Court pointed out and the Court of Appeals affirmed, three sets of producers must interact to deliver a product to the consumer in this industry. Independent software vendors (ISVs, like Netscape and Sun) must be able to write

applications (like Navigator) that operate on top of the Microsoft monopoly Windows operating system. Computer manufacturers (original equipment manufacturers, or OEMs, like IBM) must be free to offer non-Microsoft products in the IBM-compatible personal computers (PCs) that they sell to the public. Consumers must be able to choose products in an unbiased environment so that competition on the merits determines which products survive and thrive.

There is every reason to believe that consumers would receive better products at lower prices if Microsoft's anticompetitive practices were eliminated. Developers are remarkably capable of creating compatible products, but Microsoft has proven even more adept at devising anticompetitive schemes to drive them from the market. These facts alone undermine Microsoft's claim, and lays to rest any fears, that competition will cause computing to become more difficult or confusing.

IV. KEYS TO COMPETITION AND MARKET POWER IN THE PC SOFTWARE INDUSTRY

The evidence at trial focused on Microsoft's battle to prevent Netscape/Java from becoming a threat to the Microsoft monopoly through insertion into the middle of the market.[8] Although the evidence indicates that the abusive business model affected many products and markets, Bill Gates, as head of the company, made it clear that the browser was a competitive threat to Microsoft's dominant position.

> A new competitor "born" on the Internet is Netscape. Their browser is dominant, with 70% usage share, allowing them to determine which network extensions will

[8] *Findings,* at 28-29.

> catch on. They are pursuing a multi-platform strategy, where they move the key API into the client to commoditize the underlying operating system.[9]

This was the competition that Microsoft set out to kill.

1. THE APPLICATIONS BARRIER TO ENTRY

The key to understanding Microsoft's campaign to defend its monopoly against Netscape's web browser as discussed in the Court's Findings of Fact is to recognize the leverage that the huge number of already-available Windows operating systems and applications gave the company. The key role the operating system plays in the computer "platform," as well as the applications already in use, gave Microsoft the ability to strangle competition (see Exhibit III-1).

The analysis starts with the consumer, who uses the computer, and works backward down the value chain. As the Court pointed out, consumers care about applications and the things they can do with them, not operating systems. Competitors face a "chicken-and-egg" problem, referred to as the applications barrier to entry.

The overwhelming majority of consumers will only use a PC operating system for which there already exists a large and varied set of high-quality, full-featured applications, and for which it seems relatively certain that new types of applications and new versions of existing applications will continue to be marketed at pace with those written for other operating systems.[10]

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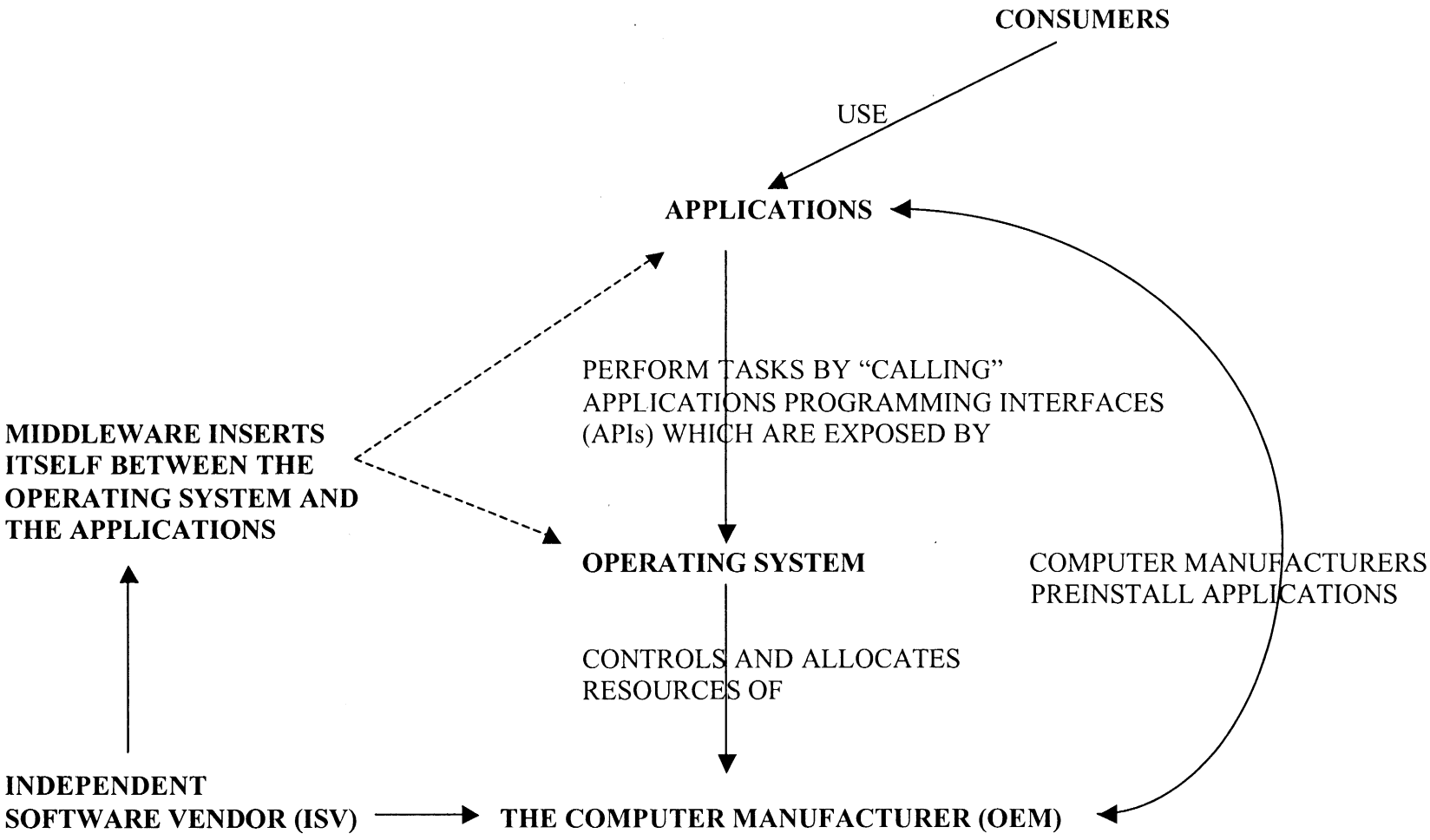
[9] Government Exhibit #20: Memorandum from Bill Gates, The Internet Tidal Wave, dated May 26, 1995, United States v. Microsoft, 84 F. Supp. 2d 9 (D.D.C. 1999) (Nos. CIV. A. 98-1232, 98-1233) [hereinafter *Internet Tidal Wave*].

[10] *Fact*, at 30.

EXHIBIT III-1: THE ROLES OF APPLICATIONS AND MIDDLEWARE IN COMPUTER PLATFORMS



Microsoft's domination of the industry rests on the huge base and monopoly position[11] in its operating systems in PCs and applications[12] in which consumers have invested substantial financial resources and time. An "operating system" is a software program that controls "the allocation and use of computer resources (such as central processing unit time, main memory space, disk space, and input/output channels)."[13] The purpose is to support "the functions of software programs, called "applications," that perform specific user-oriented tasks,"[14] like displaying text one the screen. The operating system supports the functions of applications by exposing interfaces, called "application programming interfaces," or "APIs."[15]

Programmers are not likely to write applications for non-Microsoft operating systems because of this installed base. Consumers are not likely to switch operating systems if their old applications will not run on the new operating system.[16] As the person responsible for establishing prices for Microsoft's most important customers (computer manufacturers put)[17] put

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[11] *Fact*, at 35, *En banc*, at 13.
[12] *Fact*, at 36-44.
[13] *Fact*, at 2.
[14] *Fact*, at 2.
[15] *Fact*, at 2, 30.
[16] *Fact*, 30.

> Unfortunately for firms whose products do not fit that bill, the porting of applications from one operating system to another is a costly process. Consequently, software developers generally write applications first, and often exclusively, for the operating system that is already used by a dominant share of all PC users. Users do not want to invest in an operating system until it is clear that the system will support generations of applications that will meet their needs, and developers do not want to invest in writing or quickly porting applications for an operating system until it is clear that there will be a sizeable and stable market for it. What is more, consumers who already use one Intel-compatible PC operating system are even less likely than first-time buyers to choose a newcomer to the field, for switching to a new system would require these users to scrap the investment they have made in applications, training, and certain hardware.

[17] See Mary Jo Foley, *Who is Microsoft's Secret Power Broker?*, ZDNET, Feb. 1, 1998 (describing Joachim Kempin by saying "he has the final sign-off on all Microsoft licensing contracts with all hardware makers . . . and he is the Microsoft official around whom swirls most of the current Microsoft vs. DOJ fireworks").

it in a memo to Bill Gates in late 1997, "the existing investments in training, infrastructure and applications in windows computing are huge and will create a lot of inertia."[18]

2. COMPLEX COMPETITION IN COMPUTER PLATFORMS

As Microsoft saw it, Netscape/JAVA could weaken its hold on the market because they were able to insert themselves between the Windows operating system and the applications that ran on top of it. They are "middleware."[19]

The threat that Microsoft saw lay in "a multi-platform strategy where they move the key API into the client to commoditize the underlying operating system."[20] Compatibility was the threat and Microsoft executives "were deeply concerned that Netscape was moving its business in a direction that could diminish the applications barrier to entry."[21]

Middleware offers independent software vendors (ISVs) the chance to write applications that can work with many operating systems. They do this by making available to programmers

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[18] Government Exhibit #365: Memorandum from Joachim Kempin to Bill Gates, dated Dec. 16, 1997, United States v. Microsoft, 84 F. Supp. 2d 9 (D.D.C. 1999) (Nos. CIV. A. 98-1232, 98-1233);

[19] *Fact*, at 28.

> Operating systems are not the only software programs that expose APIs to application developers. The Netscape Web browser and Sun Microsystems, Inc.'s Java class libraries are examples of non-operating system software that do likewise. Such software is often called "middleware" because it relies on the interfaces provided by the underlying operating system while simultaneously exposing its own APIs to developers. Currently no middleware product exposes enough APIs to allow independent software vendors ("ISVs") profitably to write full-featured personal productivity applications that rely solely on those APIs.

[20] *Fact*, at 72.

[21] *Fact*, at 72, 75; See also *Findings* at 29.

> But to the extent the array of applications relying solely on middleware comes to satisfy all of a user's needs, the user will not care whether there exists a large number of other applications that are directly compatible with the underlying operating system. Thus, the growth of middleware-based applications could lower the costs to users of choosing a non-Intel-compatible PC operating system like the Mac OS.

and *Findings* at 72

> As soon as Netscape released Navigator on December 15, 1994, the product began to enjoy dramatic acceptance by the public; shortly after its release, consumers were already using Navigator far more than any other browser product. This alarmed Microsoft, which feared that Navigator's enthusiastic reception could embolden Netscape to develop Navigator into an alternative platform for applications development.

the applications programming interfaces (APIs). When APIs are exposed, programmers can "call" them to develop new applications.

Because they hope to be compatible with numerous operating systems and hope to support many applications, these "middleware" programs make consumers indifferent to which operating system is used. This threatens to weaken Microsoft's hold on the market. In Microsoft's apt terms, it "commoditizes" its core product. If a competitor can create a stock of compatible applications, he can advertise that the new operating system can run all the existing programs, undermining the economic leverage of Windows. If the installed base of platforms and browsers are out there, the Windows operating system could be bypassed. By capturing the browser market, however, Microsoft precluded that possibility. The campaign against Netscape simultaneously extended the monopoly into the browser market and defended the monopoly in the operating system market by preserving the barrier to entry.[22]

V. MICROSOFT'S ANTICOMPETITIVE BUSINESS MODEL

A review of the economic and trade literature, evidence in court cases, and popular accounts demonstrate that Microsoft has developed a business model that is predicated on anticompetitive conduct. Exhibit V-1[23] lists each of the questionable business practices noted by the Court (and affirmed by the Court of Appeals) and identifies the specific products that were

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[22] The Court of Appeals reversed the claim to illegal monopolization of the browser market on the technical grounds that the plaintiffs had not properly defined the browser market. With Microsoft's market share exceeding 85 percent, it far surpasses the legal standard for monopoly.

[23]. For other products see generally Jennifer Edstrom & Marlin Eller, Barbarians Led by Bill Gates (1998); Wendy Goldman Rohm, The Microsoft File (1998); Randall E. Stross, The Microsoft Way (1997); John Wallace & Jim Erickson, Hard Drive (1992), and the discussion below.

the target of these practices over more than a decade. Exhibit V-2 presents a simple, non-technical summary of the key barriers to competition that Microsoft erected in the browser war.

1. THE WAR AGAINST THE BROWSER

Microsoft's first response to the growth of the Internet and the development of the browser as a threat to its operating monopoly appears to have been to attempt to divide the market or gain a mutual non-aggression agreement.[24] That is, it sought to convince a competitor to go in one direction, while it went in another. When the market division proposal was turned down, Microsoft threatened to go into the competitors' line of business more vigorously. There are at least four examples in the evidence in which Microsoft sought to divide the market. This was not the only middleware threat that it extinguished, as will be discussed below.

The trial fully documented a campaign to cut off a competitor's air supply by making it difficult to sell, find, or use his products, by shutting down distribution channels, by denying advertising and promotion channels, by undermining its functionality, by denying it resources, and by causing it to expend resources. Microsoft carried out its war against this and other middleware threats by attempting to ensure that no PC industry participants would in any way support or assist Netscape/JAVA.

As was its practice, when Microsoft's overture to divide the market with Netscape was rebuffed, it set out to market a browser of its own using its well-tested strategy of tying applications to its operating system product. There is no evidence that Microsoft's Internet browser was superior in any way to those of its competitors. [25]

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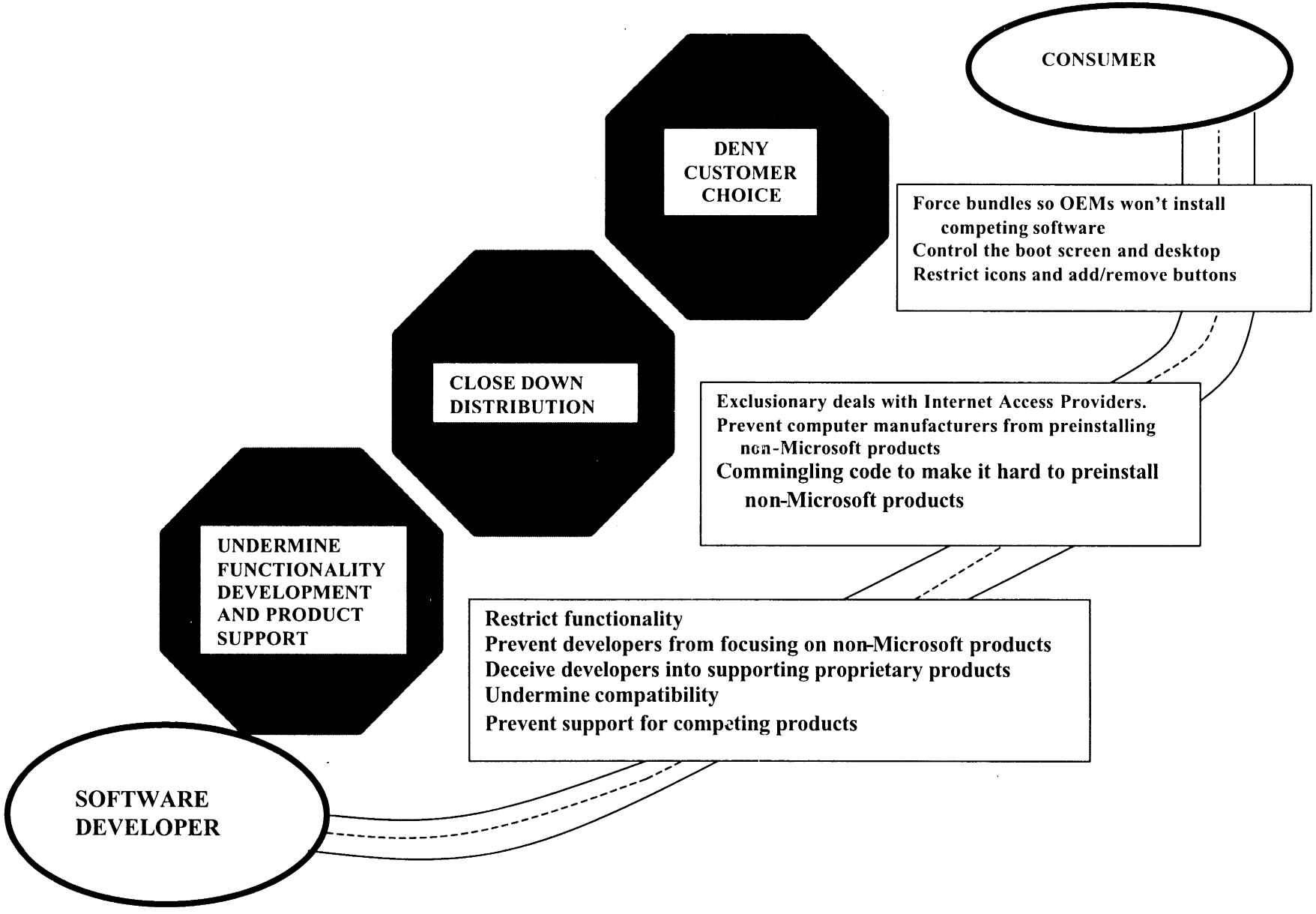
[24] *Fact*, at 79.
[25] *Fact*, at 166-169.

EXHIBIT V-1
EXAMPLES OF ABUSIVE BUSINESS PRACTICES

ELEMENTS OF THE MICROSOFT BUSINESS MODEL	TRADE PRESS ACCOUNTS OF ANTICOMPETITIVE PRACTICES		FINDINGS OF FACT UPHELD ON APPEAL
UNDER THE TABLE			
ABROGATION OF CONTRACTS	DESKTOP		
INTIMIDATION	DR-DOS, INTUIT		INTEL, APPLE
MARKET DIVISION	DOS		NAV, INTEL, REAL, APPLE
PATENT INFRINGEMENT	STAC, APPLE, 3D, GO,		
REVERSE BOUNTY	DOS		NAV
PREDATION	DOS, DESKTOP		NAV
CONTRACT PROVISIONS			
PREFERRED DESKTOP LOCATION	WEB SITES		NAV, WIN95
EXCLUSIVE DEALS	DR-DOS, DESKTOP		NAV
QUALITY IMPAIRMENT	DR-DOS,		NAV, JV
RESOURCE DENIAL	DR-DOS,		NAV
SECRET PRICE	DR-DOS, E-COMM		NAV
BUNDLING, OS TYING	DESKTOP, E-COMM		NAV, E-COMMERCE
INCOMPATIBILITY/INTEGRATION	DESKTOP, HP NEWWAVE		NAV
DISABLING	DR-DOS,		NAV
DESUPPORTING	DR-DOS, E-COMMERCE	NAV	
IN PUBLIC			
IMITATION	DR-DOS, APPLE		NAV
PREANNOUNCEMENT	DR-DOS,		NAV
INDIRECT SALES	OS,		

DESKTOP = covers the individual programs as well as the suites including Lotus, Corel, Novell, WordPerfect, Borland; DR-DOS = Novell's DR-DOS; E-COMMERCE = covers the range of transaction involving commercial transactions on the Internet; NAV = Netscape Navigator; JV=JAVA

EXHIBIT V-2: HOW MICROSOFT STOPS COMPETITION AND HARMS CONSUMERS



The preservation of its operating system monopoly was the driving force in Microsoft's entry into the browser market.[26] This is the core of the case against Microsoft. Being an innovative leader was not how this battle was to be won,[27] leverage and tying were key,[28] including efforts to undermine the quality of the competing product.

> Microsoft's executives believed that the incentives that its contractual restrictions placed on OEMs would not be sufficient in themselves to reverse the direction of Navigator's usage share. Microsoft set out to bind Internet Explorer more tightly to Windows 95 as a technical matter. The intent was to make it more difficult for anyone, including systems administrators and users, to remove Internet Explorer from Windows 95 and to simultaneously complicate the experience of using Navigator with Windows 95. As Brad Chase, Vice President for developers and windows marketing, wrote to his superiors near the end of 1995, "We will bind the shell to the Internet Explorer, so that running any other browser is a jolting experience."[29]

Thus, integration was a business strategy[30] to foreclose a competitor. This strategy could go so far as to require a delay in the release of Windows 98 until Internet Explorer 4.0 was ready to be included with that product, even though it hurt Microsoft's most important customers, the OEMs.[31]

At the heart of Microsoft's anti-competitive practices are three categories of abuses. First, it took steps to make it harder for consumers to find, install or use competing products, directly by restricting the consumer's ability to swap out Microsoft products and indirectly by pressing computer manufacturers to install only Microsoft products.[32] Microsoft took steps to prevent competitors from getting the same access to users of computers or services who had

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[26] *Fact,* at 170-171.
[27] *Fact,.* at 160.
[28] *Fact* At 166.
[29] *Fact* at 160
[30] *Fact* at 167.
[31] .Fact, at 167.
[32] *Fact,* at 171-172.

entered into an agreement with Microsoft. If OEMs,[33] ISPs,[34] or ICPs[35] were inclined to install other browsers, Microsoft sought to ensure that no browser would have equal placement. Second, it sought to foreclose distribution channels to other browsers altogether. Contracting parties were required to ship Internet Explorer (IE), and dissuaded from shipping competing browsers. Third, it took actions intended to ensure IE's quality was superior to browsers operating on Windows machines. Contracts required use of software that gave Microsoft a superior presentation, while the underlying software also disabled competitors. There were conditions to prevent competitors from garnering resources directly and indirectly.

Microsoft's executives clearly believed that if they did not leverage their market power in the operating system, they would lose the browser war.[36] Not only did Microsoft manipulate the operating system to give its product an advantage, it denied or slowed access to its operating system to prevent Netscape from improving and delivering its own product.[37] The Court concluded that under the weight of the anti-competitive onslaught, Microsoft's competitors were forced to give up. Squeezed out of the market and drained of resources, they could no longer afford to devote resources to the product. The key to Microsoft's strategy was the cross-subsidy from the monopoly rents earned on the operating system.[38]

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[33] *Fact,* at 202-241.
[34] *Fact,* at 272-310.
[35] *Fact,* at 311-338.
[36] *Fact* at 167-168.
[37] *Fact,* at 90-92.
[38] *Fact,* at 379.

Despite the fact that it did not charge for Internet Explorer, Microsoft could still defray the massive costs it was undertaking to maximize usage share with the vast profits earned licensing Windows. Because Netscape did not have that luxury, it could ill afford the dramatic drop in revenues from Navigator, much less to pay for the inefficient modes of distribution to which Microsoft had consigned it. The financial constraints also deterred Netscape from undertaking technical innovations that it might otherwise have implemented in Navigator. Microsoft was not altogether surprised, then, when it learned in November 1998 that Netscape had surrendered itself to acquisition by another company

2. OTHER PRODUCTS IDENTIFIED AT TRIAL THAT WERE VICTIMS OF ANTICOMPETITIVE CONDUCT

i) Intel

Microsoft was quick to quash any hint of competition from products that could act as middleware by exposing APIs. Microsoft attacked Intel's contemplation of developing software applications, denying consumers functionalities for years.[39]

Microsoft's prevented Intel from developing software by using its key leverage over computer manufacturers. In an oft-repeated pattern, Microsoft "pressured the major OEMs to not install NSP software on their PCs until the software ceased to expose APIs."[40] Intel's "software could not find its way onto PCs without the cooperation of the OEMs."[41] As a result "Intel realized that it had no choice but to surrender the pace of software innovation to Microsoft."[42]

Microsoft's ability to control the activity of computer manufacturers was demonstrated in this incident and has played a key role in many of its anticompetitive campaigns.[43] When Microsoft uses its control over operating systems to close the OEM channel to potential competitors – a power it was not shy to use – even giants like Intel must abandon the effort to compete.

> Microsoft was not content to merely quash Intel's NSP software. At a second meeting at Intel's headquarters on August 2, 1995, Gates told Grove that he had a fundamental problem with Intel using revenues from its microprocessor business to fund the development and distribution of free platform-level software....

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[39] *Fact*, at 94-103.
[40] *Fact*, at 101
[41] *Fact*, at 101
[42] *Fact*, at 101.
[43] *Fact*, at 103.
OEMs represent the primary customers for Intel's microprocessors. Since OEMs are dependent on Microsoft for Windows, Microsoft enjoys continuing leverage over Intel. To illustrate, Gates was able to report to other senior Microsoft executives in October 1995 that "Intel feels we have all the OEMs on hold with our NSP chill." He added: "This is good news because it means OEMs are listening to us. Andy [Grove] believes Intel is living up to its part of the NSP bargain and that we should let OEMs know that some of the new software work Intel is doing is OK. If Intel is not sticking totally to its part of the deal let me know. (101-103)"

> Faced with Gates' threat, Intel agreed to stop developing platform-level interfaces that might draw support away from interfaces exposed by Windows.[44]

As was the case in a number of other instances, part of Microsoft's goal was not only to keep its product space free of actual competitors, but also to send a strong signal to potential competitors to vacate the field. "Gates said, Intel could not count on Microsoft to support Intel's next generation of microprocessors as long as Intel was developing platform-level software that competed with Windows."[45] These same tactics were later used against Intel to force it to stop supporting Netscape/Java.

ii) IBM

IBM was a particular target for Microsoft efforts to seal off its market.[46] Acting on its desire to protect its monopoly "from 1994 to 1997 Microsoft consistently pressured IBM to reduce its support for software products that competed with Microsoft's offerings."[47] When Microsoft wanted a competitor to cease it could withhold access to its monopoly products. Thus, "just three days after IBM announced its intention to pre-install SmartSuite on its PCs, a Microsoft executive informed his counterpart at the IBM PC Company that Microsoft was terminating further negotiations with IBM for a license to Windows 95."[48] Simultaneously, it withheld access to its product, setting back IBM's development of its product and causing it to miss the most critical sales season.

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[44] *Fact,* at 103.
[45] *Fact,* at 102
[46] *Fact,* at 115.
[47] *Fact,* at 132
[48] *Fact,* at 102

> Then, on July 20, 1995Microsoft also refused to release to the PC Company the Windows 95 "golden master" code. The PC Company needed the code for its product planning and development, and IBM executives knew that Microsoft had released it to IBM's OEM competitors on July 17. Microsoft's purported reason for halting the negotiations was that it wanted first to resolve an ongoing audit of IBM's past royalty payments to Microsoft for several different operating systems.

Over this period, IBM's ability and intention to preinstall an office suite brought retaliation from Microsoft and reduced its shipment of computers substantially. As in the case of the browser, Microsoft centered its attention on denying a competing product the easiest means of distribution — preinstallation. Microsoft sought to prevent IBM from preinstalling its office suite on its computers. Interestingly, this battle to convince IBM not to preinstall its office suite was essentially an attempt to divide the market, to have IBM focus on being a hardware company and stay out of the software business. The instruments that Microsoft used to undermine IBM's preinstallation of a competing product are familiar—delay and desupport by leveraging the operating system.

This is not the only reason that Microsoft's Office came to dominate the office suite market, but it was a landmark on Microsoft's abusive timeline. This was a crucial moment to prevent a competitor from gaining an installed base. Microsoft's advantage came from leveraging the operating system and impairing the ability of the most important competitor to ship its product. Microsoft executives certainly thought that the leverage was helping. When a senior Microsoft executive argued for leveraging the operating system more to win the browser wars, he pointed to the office suite market as an example of how leverage works. His words on leverage are so strikingly clear that no court could ignore them.

> Let's [suppose] IE is as good as Navigator/Communicator. Who wins? The one with 80% market share. Maybe being free helps us, but once people are used to a product it is hard to change them. Consider Office. We are more expensive today and we're still winning. My conclusion is that we must leverage Windows more. Treating IE as just an add-on to Windows which is cross-platform [means] losing our biggest advantage—Windows market share.[49]

[49] *Fact*, at 166.

iii) Apple

Apple's software efforts also prompted Microsoft to preserve its monopoly and divide markets.[50] The Court noted that the force used to keep Navigator out of Apple computers could serve no positive purpose for Microsoft, since "there is no conceivable way that Microsoft's costly efforts to induce Apple to preinstall Internet Explorer on Apple's own PC system could have increased consumer demand for Windows."[51]

The tools used by Microsoft in its dealings were blunt, especially where it saw that Apple could provide an avenue for competition.[52] As we have seen, compatible cross-platform software was the trigger for its anticompetitive efforts – "Because QuickTime is cross-platform middleware, Microsoft perceives it as a potential threat to the applications barrier to entry."[53] Microsoft launched a year long campaign in which it "tried to persuade Apple to stop producing a Windows 95 version of its multimedia playback software, which presented developers of multimedia content with an alternative to Microsoft's multimedia APIs."[54]

Microsoft backed its effort to drive Apple out of developing applications for the Windows environment with threats that it "would enter the authoring business to ensure that those writing multimedia content for Windows 95 concentrated on Microsoft's APIs instead of Apple's."[55] Microsoft went on to suggest that incompatibilities would occur since "the technologies provided in those tools might very well be inconsistent with those provided by

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[50] *Fact,* at 166.
[51] *Fact,* at 141.
[52] As *Time Magazine*, "Mine All Mine," June 5, 1995, put it summarizing court papers, "Gates personally threatened to stop developing applications software for the Macintosh if Apple continued working on a programming tool that would compete with Microsoft's."
[53] *Fact,* at 104.
[54] *Fact,* at 105.
[55] *Fact,* at 106.

Apple's tools."[56] The threat was backed up with the cross-subsidies available when the "Microsoft executives warned, Microsoft would invest whatever resources were necessary to ensure that developer used its tools; its investment would not be constrained by the fact that authoring software generated only modest revenue."[57]

Thus Microsoft's ability to threaten, leverage and retaliate against large, long-standing companies like Apple was immense. The Court concludes that any benefits that might have accrued from the "short term by resolving existing incompatibilities in the arena of multimedia software, paled in comparison to the long term cost, since "the departure of an experience, innovative competitor would not have tended to benefit users of multimedia content."[58]

Microsoft would later use the same threats to withhold support for applications to force Apple to ship Internet Explorer and exclude Navigator.[59]

VI. THE LONG HISTORY OF ANTICOMPETITIVE CONDUCT

By studying the examples of the use of leverage in the trial, we learn the key pressure points that must be relieved if competition is to be restored to the industry. There are other examples frequently noted in the trade and other press.[60] These reinforce the understanding of

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[56] *Fact,* at 106.
[57] *Fact,* at 107.
[58] *Fact,* at 110.
[59] *Fact,* at 341-356.
[60] Specific examples have been offered involving a number of different technologies and products. The list includes DR-DOS, GO, and Intuit, in addition to Netscape (Time, June 5, 1995, p. 49).

> Fueling the debate – and industry gossip mills – are fresh details of Microsoft's hard-nosed business dealings. In a new book called Startup for example GO Crop. Founder Jerry Kaplan tells how in 1989 his company, hoping to persuade Microsoft to write some software for GO's pen-based computer system, gave Gates and his developers a demonstration of how it worked. Microsoft said it wasn't interested. But two years later, the company unveiled a competing system

how anticompetitive leverage works in this industry, as well as demonstrate just how deeply embedded this business model is in Microsoft's behavior[61] and how far back in its history it reaches.[62] Some of these examples are extremely important, like the battle against DR-DOS, as will be discussed below.

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called Pen Windows that bore an uncanny resemblance to GO's design using the same "gestures" to insert and delete characters...

But such a thing would not be out of character. In a complaint filed in April as part of the Intuit suit, the Justice Department quoted a memo, directed to Gates, in which a Microsoft vice president told how he had tried to pressure Intuit chairman Scott Cook into accepting a $1 billion buyout offer by hinting that Microsoft might spend the money attacking Intuit in the marketplace.

Rohm, pp. 148, points to another example, " Clow testified Microsoft had threatened that if Stac didn't give it the technology, it would do it anyway and put Stac out of business." See, also, Wallace and Erickson, p. 316, who recount an incident in which "Gates demanded that Sculley cancel the project and sign over to Microsoft rights to the MacBASIC name. As a lever, Gates told Sculley he would not renegotiate the license for Apple to use Microsoft's BASIC on the best-selling Apple II."

[61].Gleick, *supra* note 64, at 88.

In 1991, Mike Maples, a senior Microsoft executive, described the company's goals in the aggressive style that its top executives use to favor: If someone thinks we're not after Lotus and after WordPerfect and after Borland, they're confused.... My job is to get a fair share of the software applications market, and to me that's 100 percent.

Wallace and Erickson, p. 211, find this attitude much farther back in the company's history..

One day in late 1981, Gates approached Richard Leeds, project manager for COBOL, one of the languages that Microsoft delivered to IBM for the PC, in the hallway of the Northrup building outside of Leeds' office. Gates was trying to get the word out about what he considered Microsoft's top priority. And what was on his mind was Microsoft's operating systems strategy. "We're going to put Digital Research out of Business," he told Leeds, slamming his fist into the palm of his hand.

He would issue a similar vow twice more during the next year, according to Leeds, promising to put MicroPro and Lotus out of business, each time emphasizing his promise by smashing his fist into his hand. ..

It was clearly not enough for Microsoft to beat the competition; Gates wanted to eliminate his opponents from the playing field. "Bill learned early on that killing the competition is the name of the game," said a Microsoft executive who was with the company in the early 1980s. "There just aren't as many people later to take you on. In game theory, you improve the probability you are going to win if you have fewer competitors.

[62] The practice of tying was deeply embedded in the very beginnings of the company approach. Wallace and Erickson, p. 212, give an example from 1982.

Sometimes, he used strong-arm tactics bordering on the unethical. One such case involved the Rainbow computer introduced by Digital Equipment Corporation in 1982. At the time, DEC dominated the minicomputer market with its famous PDP series of machines. The Rainbow was the company's first attempt at a personal computer. The Rainbow was unique in that it had dual processors enabling it to run 8-bit and 16-bit software. According to a knowledgeable industry source, the Rainbow was originally intended to run only on CP/M. But Gates "persuaded" DEC to eventually include DOS as an option. According to this source, DEC wanted to be able to offer Microsoft Word with the Rainbow. This word processing application was under development at Microsoft in 1982, but was not officially released until the following year. Although versions of

1. THE ANTICOMPETITIVE BUSINESS MODEL

Using the operating system as the core of its market power, Microsoft erects barriers to entry. It freezes out competitors with incompatibilities, [63] builds in features to impede or disable competing programs, and withdraws support for competitor programs. The practices span at least three generations of operating systems. It began with the "scare message" in Windows 3.1 to makes DR-DOS users "feel uncomfortable and when he has bugs, suspect the problem is DR-DOS and then go out and buy MS-DOS or decide not to take the risk for the other machines he has to buy for his office." [64] Windows 95 and Windows 98 have apparently disabled competitors' programs rather than warn about possible incompatibilities.[65] As discussed below, Microsoft has gone back to misleading warnings with its Windows XP offering.

> Word were designed to work on computers that ran either on CP/M or DOS, Gates insisted that Digital Equipment's deal for Word also include his operating system.

[63] The practice was deeply embedded in the business strategy, although it was refined over time. Wallace and Erickson offer the following example from 1982-83 (p. 233).

> Still, for a very brief time in early 1983, Multiplan *did* enjoy an advantage over 1-2-3. Microsoft released its upgrade for he IBM PC/XT, causing problems for 1-2-3 on the updated operating system.
>
> According to one Microsoft programmer, the problems encountered by Lotus were not unexpected. A few of the key people working on DOS 2.0, he claimed, had a saying at the time, DOS isn't done until Lotus won't run." They managed to code a few hidden bugs into DOS 2.0 that caused Lotus to break down when it loaded. "There were as few as three or four people who knew what was being done," he said. He felt the highly competitive Gates was the ringleader.

The art had apparently been refined by the early 1990s (Wallace, p. 38-39).

> "He denied there was a Chinese Wall at Microsoft," Schmidt wrote in his notebook, "and clearly stated that the software groups throughout all of Microsoft's Corporation talked to all others. He claimed that the use of hidden APIs was an error by the team..."
>
> The hidden APIs referred to by Schmidt are applications programming interfaces, or "calls," programming codes integrated into an operating system such as Windows to allow it to respond to commands from an application program. If competitors don't know about these hidden or undocumented calls, their applications will not work as well as Microsoft's... Microsoft had long denied that it deliberately designed hidden calls into its operating systems, but in the summer of 1992, Andrew Schulman, a programming expert living in Cambridge, Massachusetts, published a book *Undocumented Windows*, which confirmed that Microsoft had lied. Microsoft later acknowledged that Excel and Word used at least 16 APIs that had been hidden in Windows.

[64] ROHM, *supra* note 23, at 89.

[65] *See* James Gleick, *Making Microsoft Safe for Capitalism*, 1996 ANTITRUST L. & ECON. REV. 71, 81; "The setup routine for Microsoft's new Windows 98 operating system deliberately disables files used by competitors' software

Threatened loss of support was used for at least a decade.[66] Several examples came up in the court case and they have recurred with respect to the Windows XP offering.

The practice of imposing proprietary standards on previously open standards has become so clearly identifiable as a business strategy that they have been given a name—embrace and extend.[67] These practices make it difficult for competitors to design products that operate well as the operating system is manipulated and changed.[68] The essence of the Microsoft business

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and installs different versions of those files for the use of Windows 98." *Windows 98 Disables Microsoft Competitors' Software*, CNET, July 4, 19981.

[66] Wallace and Erickson cite an example from 1985, p. 315.

> When Apple threatened to sue Microsoft in 1985 over Windows for copyright violations, Gates said he would stop development of Excel and Word for Mac, which at the time were desperately needed software applications which Apple hoped would spur sagging sales of the Macintosh. Apple had no choice but to back down on its threat to take legal action. Instead, it signed a licensing agreement giving Microsoft royalty-free rights to use the graphical display technology developed for the Macintosh.

SEE ALSO ROHM, *supra* note 23, at 69, 70; *Mine All Mine*, TIME, June 5, 1995.

[67] The extension of this strategy to the Internet is the occasion for the current battle over Microsoft's business practices. As PC Week Online, June 8, 1998, put it.

> Microsoft's strategy, also known as "embrace and extend," is not new. Gates first mentioned it publicly on Dec. 7, 1995, when Microsoft let it be known that the Internet threatened the domination of Windows on the desktop. Since then, Windows has "embraced" the Web right into the operating system. Fair enough, but the case isn't completely about putting a browser into Windows. It's about not allowing someone else's browser to have a fair shake in the only operating system most users have access to.
>
> Microsoft also has extended the Java programming language with extensions that render applications developed with it unable to execute, as intended, across multiple operating systems. And, there's this week's news: Microsoft is working on extensions to Dynamic HTML that would make that cross-platform solution incompatible with browsers other than its own Internet Explorer.

Wallace, p. 149, notes that "those two words would eventually become the centerpiece of Microsoft's Internet strategy."

[68] EDSTROM & ELLER, at 117. ROHM, *supra* note 63, at 187 recounts the complaints about the desktop applications. Gleick, *supra* note 72, at 87 notes a similar phenomenon with respect to the Internet.

> The Microsoft Network as an on-line service has its problems – performance is sluggish and the content thin – but as new computers stream into the marketplace with Windows 95 already installed, millions of newcomers will find their way to the Internet by clicking that Microsoft icon. Hence the extra annoyance of its competitors over the little matter of Windows 95's disabling their users existing Internet access. Many users who had installed the widely popular Netscape browser and then tried Microsoft's Internet Explorer discovered that Netscape would no longer work... In the Microsoft version of events, Windows 95 does not "disable" anything. It just happens that some companies' applications cease functioning – they "use nonstandard components" and "need special configuration." Those companies violated Microsoft's published guidelines, he says: they have realized their error and are preparing new versions of the software to repair the problem.

strategy is not simply to make it easy to use Microsoft products, but to make it hard to find and hard to use competing products. Microsoft locks customers in with constant imitation of competing products[69] or promises to imitate them.[70]

> The truth is not so innocent. Most Internet dial-up software written for Windows relies on a piece of software called "winsock." Everyone's winsock is supposed to be more or less interchangeable with everyone else's, but differences do exist. Many vendors put their winsock into the Windows directory of the user's computer – a friendly practice, since it is then available to other software that might need it, but a risky one, too. If Windows 95 sees a non-Microsoft winsock, it carefully and explicitly replaces it... He acknowledges that the specification for using the operating system's new dialer were slow in coming but says they are now available to all who want them. And for that matter, he asserts, if Microsoft chose to keep such specifications private, to give a competitive advantage to its many software departments, that would be the company's privilege. It does own the operating system, after all.

CNET, July 4, 1998.

> Windows 98 includes a new utility, the Version Conflict Manager, or VCM, to keep track of disabled files and provide a way for users to switch the files back. But the Win98 setup routine does not provide any notice to users that he files are being changed or that the Version Conflict Manager is available if a competitors' software no longer operates...
> The applications .. may no longer work properly, or it may no longer work at all...
> The Version Conflict Manager lets the user select a file and trade the older version for the newer version. But a Win98 user typically has no knowledge of what applications use which shared files or which version of each file would be "better." Moreover, the utility is unlikely to be found routinely by users because it is buried deep within Win98's menu structure: Click Start, Program, Accessories, System Tools, System Information, Tools, Version Conflict Manager – then you will find it

[69]See Willow A. Sheremata, Barriers to Innovation: A Monopoly, Network Externalities, and the Speed of Innovation, 42 ANTITRUST BULL. 937, 941, 964, 967 (1997) [hereinafter Sheremata, Barriers to Innovation].

[70] The preannouncement issue received considerable attention during the first federal action against Microsoft. ELLER & EDSTROM, *supra* note 23, at 42-43; WALLACE & ERICKSON, *supra* note 63, at 240-48; Wallace and Erickson, p. 257, offered the following characterization.

> In October 10 1983 VisiCorp announced that it planned to start shipping VisiOn. Gates' boast nine months before – that Microsoft would be the first to market with a graphical user interface – evaporated like so much hot air. VisiCorp's bombshell was followed by one from Quarterdeck, a startup software publisher that announced it, too, would build a graphical user interface, named DESQ. The market was becoming more crowded, and Microsoft began to take on the look of an also-ran.
> Gates was furious. To steal some of the spotlight from VisiCorp and Quarterdeck, he ordered that Windows be formally announced. Within two weeks, MacGregor was airborne with Gates headed for New York.
> Gates felt he couldn't afford to keep Windows under wraps any longer. He had learned that one way to prevent potential customers from flocking to a competitor's product was to announce that your company was working on something even better.

An interesting observation in this debate is offered by Orrison, p. 45, who distinguishes vaporware, which is part of a strategy to hold customers, from fumbleware, which is a genuine prediction error.

There also have been charges of back room campaigns of intimidation,[71] abrogation of contracts or patent infringement,[72] and predatory pricing, in which profits from the operating system monopoly are used to drive competitors out of other software lines.[73]

2. OTHER MIDDLEWARE THREATS

Netscape/Java was not the first middleware threat that Microsoft perceived and eliminated. In the early 1990s, Microsoft was already attacking other "middleware" to ensure its dominance in the applications market.[74] The critical role of control APIs to frustrate middleware development is central to the preservation of the monopoly. Nathan Myhrvold wrote of Microsoft's need to control API's in order to maintain its stranglehold on the operating systems business.[75]

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[71] ROHM, *supra* note 23, at 148, 237, 270.

[72] The line between imitation and abrogation of contracts or patent infringement has never been very clear in Microsoft's business model and has resulted in repeated disputes including court cases involving Stac Electronics, ROHM, *supra* note 23, at 147-151, as well as settlements of similar claims including CPM, see JOHN WALLACE, OVERDRIVE 41 (1997) and ROHM, *supra* note 23, at 41, and others such as pen-based systems, see ROHM, *supra* note 23, at 93-101, and hardware, see WALLACE & ERICKSON, *supra* note 63, at 390. ON claims of patent infringement *See* ROHM, *supra* note 23, at 93-101, 147-51; Alan Akin, *Microsoft and 3D Graphics: A Case Study in Suppressing Innovation and Competition,* July 16, 1997 (posted on Boycott Microsoft *available at* http://www.vcnet.com/bms/features/); Microsoft's strategy, also known as "embrace and extend," is not new. Gates first mentioned it publicly in *Mine All Mine*, TIME, June 5, 1998.

[73] WALLACE, at 162-65.

[74] Edstrom and Eller, pp. 113-114.

> Established partly to promote code and resource sharing between Microsoft's Word and Excel Application groups, Whitten's team was also a reaction to a new software product from Hewlett Packard called NewWave.
>
> NewWave ran on top of Windows 2.03 and was part of HP's glowing vision of how the office of the future would work: orchestrated information sharing among different applications.
>
> If HP were successful, it could end up owning the application programming interfaces, or APIs, dictating how applications would run on a PC. If HP succeeded, instead of writing to Microsoft's Windows APIs, developers might write to HP's. This was an immediate threat.

[75] Edstrom and Eller, pp. 113-114.

> The relationship of an application to the system API is similar to the relationship that the roots of a tree have with the ground—it is very complicated and makes it difficult for third parties to clone. This helps prevent competitors from dislodging a successful operating system. Evolution and innovation provide another barrier as well as upgrade revenue. The system must evolve its APIs and implementation over time in order to remain successful. This gives ISVss more features to exploit, makes it more difficult to clone, and it gives users a reason to pay for an upgrade.

Another middleware product that makes a brief appearance in the court case, but is now a much more important issue, is RealNetworks, whose software facilitates the Web-based "streaming" of audio and video content. RealNetworks' software is middleware because it "presents a set of APIs that competes for developers attention with APIs exposed by the streaming technologies in Microsoft's DirectX."[76] RealNetworks seeks to offer a cross-platform compatible product and has developed various versions for different operating systems. Microsoft executives saw this as another threat viewing it "with the same apprehension with which they viewed Apple's playback software – as a competing technology that could develop

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The applications architecture group sprang forth immediately, and from it sprang object linking and embedding (ole).
It was heavily criticized for making the overall windows system fat and bloated. Ole consumed memory, process cycles, and not surprisingly, was difficult for developers to support.
Applications compatibility introduced a whole other set of constraints on applications developers. But that was exactly what it was designed to do. As eller argued, ole was supposed to be fat and bloated. Integration was all about making monolithic applications slowly trade components among each other.
Ole was designed to protect developers of big applications who were afraid of being scooped by slick applets, little applications being crafted by much smaller development companies.
Microsoft didn't want a lot of other companies writing code that could compete. It wanted to keep barriers to entry very high. The idea, in fact, was to keep raising the bar, putting in more layers of software and apis, which developers would then have to support. Microsoft wanted to make it so gnarly that anybody who couldn't devote a team of one hundred programmers to every windows application would be out of the game.

EDSTROM & ELLER, at 117. Rohm recounts the complaints about the desktop applications, p. 187.

Under subpoena by the Justice Department, WordPerfect, Lotus, Novell, Borland and others had shown federal attorneys that Gates was attempting to restraint trade by restricting access to essential operating system specifications to software developers making applications programs for Chicago. Microsoft would not provide access to any company developing products for standards not owned by Microsoft.

Gleick, p. 87, notes a similar phenomenon with respect to the Internet.

Microsoft responds that the specifications are freely available; its own Windows implementation of those specifications, however, is proprietary and available for those who wish to pay for a license, possibly on a per transaction basis. It has become a familiar scenario: Microsoft claims an architecture is public and open; its competitors say the crucial details are reserved to Microsoft alone.

[76] *Fact,* at 111-114.

into part of a middleware layer that could, in turn, become broad and widespread enough to weaken the applications barrier to entry."[77]

Here again, Microsoft sought to prevent competition by diminishing compatibility, trying to convince RealNetworks "to limit itself to developing value-added software designed to run on top of Microsoft's fundamental multimedia platform."[78] Although an agreement was reached, there was apparently a misunderstanding, since RealNetwork continued "developing fundamental streaming software."[79] As we shall see below, Microsoft's struggle to undermine this type of cross-platform middleware continues.

3. OPERATING SYSTEM COMPETITION

Although it has been a long time since Microsoft gained undisputed control of the PC operating system market, a look back at how it drove its last competitor out of the PC market is instructive. If we go back to the late 1980s and early 1990s, we find conduct in the operating system war with DR-DOS that was as prominent as it was in the Browser case. The company's most intense reaction is always to a threat to the underlying monopoly in the operating system. [80]

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[77] *Fact*, at 111.
[78] *Fact*, at 113
[79] *Fact*, at 114.
[80] Rohm, pp. 40...66.

> Gate's pal Ballmer knew how paranoid Gates was about DR-DOS. Ballmer had read the e-mail Gates had shot off to him, railing about the competing product... Retail sales of the product had started to outstrip those of Microsoft DOS. It was all but a companywide policy to kill DR-DOS using every possible means...
> Vobis was the largest computer manufacturer in Germany – all of Europe for that matter – and at the beginning of 1991, 100 percent of the computers it sold were being shipped with DR-DOS.
> The edict had been handed down from Gates through the ranks: We want DR-DOS not to exist in this account. They had even set a date for her to meet the goal that the company be selling "no DR-DOS" but all Microsoft DOS and at least 50 percent Windows.

The victory over DR-DOS did not rest on a quality advantage.[81] Rather, Microsoft imposed contract conditions on suppliers that foreclosed and deterred competition relying on now familiar tactics like withdrawing support – "CEO Lieven... complained that Microsoft had threatened to cut off technical support and access to information if Vobis continued to sell DR-DOS."[82]

The early use of contracts to secure the operating system monopoly against its rival, DR-DOS, is central to Microsoft's dominance in the 1990s.[83] At the same time Microsoft was leveraging DR-DOS out of the market, it was leveraging competing desktop applications out of the market.[84] As with the browser, these earlier cases of leveraging involved more than just

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[81].Sheremata, *Barriers to Innovation*, at 942.

> At the time DR-DOS 5.0 received much critical acclaim as the superior product. However 1 month after DRI introduced DR-DOS 5.0, Microsoft preannounced a similar set of features for MS-DOS. Although Microsoft did not ship these features until over 1 year later, by 1993 market share for DR-DOS had fallen to 3%. MS-DOS share rose to 79%.
> However, MS-DOS technology was based on CP/M which was an earlier version of DR-DOS. This lends credence to reports that DR-DOS was the product with superior quality. Apparently, Microsoft successfully applied its monopoly power to forestall competitive innovation.

[82] Rohm, pp. 69, 70

[83] ROHM, at 41.

> By 1991 account managers would read the terms of the licensing policy in their OEM manuals in brief form. The new licensing terms had started in the Far East, when low-cost clone vendors were happy to increase their slim profit margins by using a cheaper but better version of DOS—from DRI. Microsoft had implemented what eventually became known as "per processor" licenses, which effectively locked computer makers into contracts that required them to pay for the Microsoft operating system on every computer

[84] *Id.* at 71, 77, 78.

> Gates, Lieven, Huels, and Reichel now discussed, among other things, an agreement "to get DRI/Novell out of Vobis," a strategic partnership between the two companies, and a commitment that Vobis would agree to sell "no Novell NetWare Lite" but instead would contract for 25,000 copies of Windows for Workgroups—a new product for Microsoft in the market for computer networks in which it had no presence....
> Among the e-mail messages not produced to the feds from the computers of Microsoft Germany was one that Bernard Vergnes sent to a number of other Microsoft executives on September 7, 1992. Along with documenting the Vobis deal, it showed Microsoft's intent to use its DOS contracts to leverage computer makers into buying Microsoft applications software in place of that from Lotus and others....
> In April 1991, Ballmer and Lieven had met in Nice. Ballmer had discussed other "inducements," as Lieven would testify, involving bundling Microsoft applications software with an operating system deal. A Microsoft Word/Excel combination was suggested as part of the DOS/Windows deal....

shutting down distribution channels. The full range of technical and economic weapons was used to drive competing software from the market and to undermine its attractiveness to consumers. Microsoft leveraged the operating system by creating incompatibilities. From the outset, the process of building incompatibilities was driven by preservation of the monopoly on the operating system.

VII. CONSUMER ARE HARMED BY THE ABUSE OF MARKET POWER

1. BARRIERS TO ENTRY AND MONOPOLY ABUSES

Among the findings that the Court of Appeals left in place, and indeed reiterated in a number of instances, were the consumer harm findings of the District Court. The Courts have now concluded and affirmed that Microsoft abused its monopoly power. Relying on the leverage of the operating system and the power it conveys over computer manufacturers, as well as the cross subsidies that sustain Microsoft while its competitors are strangled, Microsoft avoids the typical pressure in a competitive market.

It is not pressed to provide high quality[85] or customer service.[86] From the public policy perspective, the monopolist is insulated from paying the price of shipping inferior goods, while the public bears the burden.[87]

After noting the success of Gates' meeting with Lieven, and the strong market presence of Vobis—number one in market share, over IBM—the memo said: Lieven . . . is willing to no longer offer DRI-DOS or Network Lied [*sic*] . . . As you know, Lotus and Borland have been aggressively approaching our OEMs, and Vobis is no exception.

[85] The problem is endemic as Wallace and Erickson observed, p. 245.

Microsoft would eventually get Word right, but it took several major revisions. This would become a pattern with most of the company's initial application products from IBM PC and compatible computers. Vern Raburn, former president of Microsoft's Consumer Products

Bundling allows prices to be hidden from the public, since the software is packaged with the computer and multiple applications are bundled together.[88] The pricing terms and conditions are highly secret,[89] locked in the contracts between Microsoft and the companies that actually sell to the public.

With no competition, Microsoft upgrades, which are sold to the public, become extremely high margin products.[90] Microsoft's charges are excessive and consumers are forced to purchase superfluous functionality.[91] Consumers pay more than they should for more

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Division, discussed this aspect of Microsoft in *Fortune* magazine: "With few exceptions, they've never shipped a good product in its first version. But they never give up and eventually get it right. Bill is too willing to compromise to get going in a business.

Gleick, p. 82.

Time and again its strategy has been to enter a market fast with an inferior product to establish a foothold, create a standard and grab market share.

[86] Gleick, p. 88, goes on to note (p. 88) that unlike its competitors in applications, Microsoft did not have toll free hotlines.

[87] As an article in Computer, July 1998, put it,

Fast versioning leads to success in the software industry. High-quality products lose out to quick-and-dirty products because Joe Sixpack isn't a discerning consumer. Also, enough brain-dead Larry Lemmings will follow the market leader, so Microsoft could produce a lot of Gonzo Products before its bottom line began to sink.

[88] New York Times, June 5, 1998, D-1.

One way or another, the consumer pays for this additional product – it is built into the retail prices of the computer – whether the buyer wants it or not. This gives Microsoft an unfair advantage in the fiercely competitive Internet-access market, where there are plenty of lean and efficient rivals. Such "tying arrangements" in which a consumer is compelled to buy one product as a condition of buying another, are the hoariest of antitrust abuses, considered, illegal per se

[89] Business Week, June 15, 1998

And while the retail price will be the same, Microsoft does not publish a price list for PC makers, so it's hard to detect changes. For this reason it is doubtful that any PC maker will go public with gripes. Says one: "No one wants to testify in front of a Senate Panel for fear that Microsoft would turn around and raise your price."

Rohm, p. 105, notes the role that his secrecy plays in enabling Microsoft exercise power over the firms with which it deals.

[90] New York Times, June 5, 1998, p. D-1.

David Rearderman, an analyst at Nationsbank Montgomery Securities, estimates that operating system revenues in 1997 were $4.6 billion and produced gross profit margins of 90 percent.

New York Times, December 1 1997, p. D-4

[I]n contrast to product-development cycles in old-style manufacturing businesses, like automaking, extensive changes to an operating system – and the subsequent upgrades they force throughout the chain – require no costly retooling of assembly lines and no new raw materials. The main cost is human capital – some months of programmers' time.

[91] New York Times, December 1, 1997, D-4.

functionalities that are bundled into packages of software than they should, and find themselves forced to buy bigger machines to accommodate the bloated package.[92]

What the court case provides is a strikingly clear picture of how Microsoft uses it market power. Microsoft executives knew full well there were *"huge"* barriers to entry into the operating system market. In a December 1997 memorandum, the Senior VP responsible for pricing to Microsoft's most important customers—computer manufacturers (original equipment manufacturers or OEMs)—concluded that Microsoft's high prices were protected by a variety of barriers to entry.

Although computer manufacturers had an incentive to compete in operating systems because of Microsoft's high prices, they faced problems of consumer switching costs.[93] Software vendors were stymied by compatibility problems.[94] Even Intel could not compete in

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> The key to Microsoft's success is its strategy of linking its Windows operating systems – the foundation of a PC's operations – to its productivity applications, to the Internet, to its consumer products, to its programming tools and to hardware manufactures in a tight, interdependent chain. Whenever it makes a significant modification to Windows – as it did in the step from Windows 3.1 to Windows 95, for example – everything in the chain has to change, too...
> Customers are caught in the competitive spiral, being constantly pressured to upgrade "obsolete" software – though the definition of obsolescence is debatable.

[92] Gleick, p. 83.

> Anecdotally, it is clear that millions of high-end users have bought the upgrade but that millions of corporate customers have chosen to delay the inevitable heartache, particularly when most existing hardware lacks the speed and memory to run it well. It does not matter. In the long run virtually every desktop computer will run Windows 95 and its successors. New computers shipping now have Windows 95 preinstalled by default. Applications developers have either stopped developing for DOS and Windows 3.1 or soon will.

[93] Government Exhibit #365: Memorandum from Joachim Kempin to Bill Gates, dated Dec. 16, 1997, United States v. Microsoft, 84 F. Supp. 2d 9 (D.D.C. 1999) (Nos. CIV. A. 98-1232, 98-1233).

> Our high price could get a single OEM or a coalition to fund a competing effort. While this possibility exists I consider it doubtful even if they could get a product out that they can market it successfully, leapfrog us and would not deviate them from their own standard. Could they convince customers to change their computing platform is the real question. The existing investments in training, infrastructure and applications in windows computing are huge and will create a lot of inertia..

[94] *Id.*

> SUN and its coalition with Java. For the next 2-3 years the barriers are huge. . . In addition there is the compatibility barrier. . . [Netscape] may come from the browser side, but I consider them

operating systems,[95] since Microsoft could respond to such a threat by using its deep pockets to buy a chip manufacturer and bolt its operating system onto the CPU, leveraging control of compatibility to defend and extend its monopoly.[96] So much for the claim that a brilliant computer science major in his garage can displace Microsoft.[97] Not even the combination of Intel, Compaq, Sun and Netscape can overcome these barriers to entry.

2. CONSUMER HARM

The Court identified several general ways in which consumers have been harmed by Microsoft's ability to undermine the competitive process. These fall into two broad categories, qualitative and monetary.

i) Qualitative Harm

Denial of choice: Microsoft's anticompetitive practices have the effect of denying consumers choice.[98] Microsoft forces computer manufacturers to buy one bundle with all of its programs preloaded[99] and biases the screen location, start sequences and default options.[100] As a

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too weak to succeed alone—so they are only dangerous if they team up with SUN. Again compatibility and yet another platform are the biggest inhibitors.

[95] Id.

This could be an INTEL led and funded coalition—say with Compaq and Netscape. I am convinced they have been thinking about this for some time. They could buy SUN SOFT or start a skunk work project on their own. If they decide to sell the Operating System for $1 and the CPU for $200 they will get the OEMs on their side. The customer inertia argument remains and that will prevent them to build momentum easily.

[96] Id.

Our reaction could be to buy National semiconductor or AMD or both and own the CPU and the SW business—while both stocks are taking a dive. We would sell SW at $100 and CPU at cost +1. How sure are we of our partnership and how fast could we react if needed? We could bring compatibility to another platform better than anybody else and we would have the money to fund the fabrication capacity.

[97] .Report of Direct Testimony of Richard Schmalensee, p. 47.

[98] *Findings*, 247, 410; *Conclusions*, 11.

[99] *Findings*, 159, 170, 198; *Conclusion*, 4, 11, 12, 31.

[100] *Findings*, 139, 272, 301; *Conclusions*, 17, 20.

result, it is difficult if not impossible to choose non-Microsoft products.[101] Products tailored to meet individual consumer needs (consumer friendly configurations, small bundles) are unavailable.[102] Eventually, competing products disappear from the market.[103]

Microsoft imposed strict discipline on companies shipping Windows to prevent them from altering the configuration of Windows and proprietary icons.[104] The Court was struck by the extent to which Microsoft was willing to inconvenience consumers to preserve its hold on the market and the inconvenience created by Microsoft's steadfast control of the boot screen.[105] The Court took special note of the fact that the OEMs were the ones who actually dealt with the public and they perceived a significant problem in Microsoft's refusal to allow modification of the boot screen. The costs they perceived were substantial.[106]

Forcing Consumers to Buy Non-Microsoft Products in Inconvenient Ways: By foreclosing the primary channels of distribution with exclusive contracts and other deals, Microsoft forces consumers of non-Microsoft products to acquire them in time-consuming and inconvenient ways.[107]

Impairment of Quality and Innovation: Because of Microsoft's leveraging of the operating system, superior products are delayed or driven from the marketplace.[108] The Court noted at least six instances in which Microsoft sought to delay the development of competing

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[101] *Fats,* 133, 143, 203-206, 239-240, 247, 309-311, 357, 359-361; *Conclusions,* 10, 11, 15.
[102] *Fact,* 167-168, 210-216, 225-226, 247, 410; *Conclusions,* 11, 14.
[103] *Fact, 132, 395, 412*; *Conclusions,* 10, 18, 19.
[104] *Fact,* at 203.
[105] *Fact,* at 214; 410.
[106] *Fact,* at 210-216.
[107] *Fact,* at 133, 143, 203 – 206, 239 – 240, 309-311, 357, 359-361.
[108] *Fact,* identifies general problems of product delay or restrictions (90-91, 93, 132, 411), as well as six products that were delayed or undermined by Microsoft's anti-competitive practices (Navigator, 81-88; IBM's OS/SmartSuite, 116-118, 125-130; Sun's Java, 397-403; RealNetworks, 111-114; Apple's Quicktime, 104-110; Intel's Native Signal Processing, 94-103).

products.[109] It noted several instances in which it delayed the delivery of its own products to accomplish an anti-competitive outcome.[110] Existing libraries of content (documents, movies, audio files) are rendered obsolete.[111] Resources are denied to and investment is chilled in competing products so advances in technology are slowed.[112]

Undermining Compatibility and functionality: There were also several instances in which Microsoft undermined the ability of software applications or middleware to function properly with the operating system.[113] Microsoft was quite willing to undermine the quality of its own and of competing products to preserve its market dominance.

ii) Monetary Harm

Microsoft imposed monetary harm on consumers in direct and indirect ways.

Increases in Direct Costs: Because of its monopoly, Microsoft is able to charge more for the bundled package than it would in a competitive market.[114]

Indirect Costs: Microsoft also imposes a variety of indirect costs on consumers including an accelerated upgrade cycle for both software and PC hardware,[115] forcing excessive

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[109] *Fact,* at 81-88, 94-103, 116-118, 135, 111-114,

[110] *Fact,* at 167-168.

[111] *Fact,,* 90, 92, 122, 128-129, 160, 170-172; 192, 330, 339, -340, 90-91, 93, 132, 411

[112] *Fact,* at 240, 357, 379, 396-406,412; *Conclusions,* 31.

[113] *Fact,* at 92, 128-129, 160, 171-172, 330, 339, 340, 387-396.

[114] Because of the nature of the case no penalties could be imposed so calculating exactly how large the overcharges were was not a focal point of attention. The District Court did make findings on pricing, see *Findings,* 75, 62-63, 66; *Conclusions*, 6; which the Court of Appeals noted and left in place (*Appeals,* pp. 24-25).

[115] *Fact*, 57, 66. See also Charles H. Ferguson, High St@kes No Prisoners: A Winner's Tale of Greed and Glory in the Internet Wars (Three Rivers Press ed., 1999), p. 309.

> Microsoft also uses another technique, the forced upgrade cycling of its installed base, which increases its revenues but imposes huge costs on consumers by forcing them to replace their hardware more frequently than necessary. Clearly, the rapid progress of computer hardware technology helps ease the pain of the high rate of obsolescence Microsoft creates, but there is considerable pain nonetheless. The pace of updates and sheer number of new features results in the often bug-ridden bloatware that consumers and businesses are forced into accepting.
> With each new round of updates, Microsoft generally discontinues or at least deemphasizes sales and support for older versions.... The introduction of backward incompatible new features, even if each feature is used by only a small percentage of users, will quickly result in a high fraction of

functionalities into its bundles.[116] It imposes various transaction costs on non-Microsoft products in its efforts to make them less readily available to consumers.[117]

3. PRICING PATTERNS AND MONETARY HARM

The historical behavior of prices makes it possible to draw a direct line between competition and lower prices.[118] Eliminating competition results in prices being higher than they should be. The fact that the excess price results from a failure to pass cost reductions through to

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> new documents being unreadable by older versions of the application. The whole user base is therefore forced into a kind of perpetual motion machine of rapid version updating....
> This forced version cycle imposes enormous costs on users that are probably beginning to approach, or even exceed, the size of the benefits discussed earlier.
> First, users must buy new hardware more frequently. Even larger, however, are the increased installation, service and maintenance costs imposed by this regime.

[116] *Findings*, 173-179, 210-216; *Conclusions,* 6, 11, 32; Furgeson, p. 310,

> Since there is rapid technological progress in semiconductors, plus genuine competition in the hardware sector, PC costs have been flat to falling. Recently, direct and Internet retailing have further reduced manufacturing and distribution costs to extraordinarily low levels. As a result Microsoft has been able to pursue its strategy without causing unacceptable increases in hardware prices. Nonetheless, even $599 PCs are probably $100 more expansive than they would be if Microsoft wrote products more carefully and without artificial feature increases. More important, people would not need to replace their computers as frequently or spend as much money servicing them. These costs affect everyone, but they probably affect poor people and the developing world more than the average business user.

[117] See note 8, above.

[118] Rohm, p. 85, 263.

> DR-DOS had Gates going ballistic when it came out with DR-DOS 5.0 in April 1990, and now only months later his sales team was locking computer makers into contracts for Microsoft's version of the product, which it had publicly stated would appear also in 1990 (It would not appear until June 1991.)...
> Meanwhile, in e-mail after e-mail, Gates had complained to Ballmer that DR-DOS had made it impossible for him to keep prices high. How could he continue to be profitable with DR-DOS around?
> A few weeks earlier Susman had deposed Gates while Palumbo had deposed Brad Chase. Microsoft's counsel Steve Holly had been present. Susman had confronted Gates with an e-mail message to Steve Ballmer in which Gates had railed on about the fact that DR-DOS was cutting into his ability to keep prices for MS-DOS high.

Rohm, p. 183, notes similar potential with respect to applications.

> Gates then went on to itemize the key impacts of Novell's move on each area of his business. His concern was how the merged company would impact Microsoft Office, Microsoft's office productivity suite, fretting that Novell could turn its own office suite into "a serious contender" which could force price and volume cuts in our office business.

Rohm, p. 80.

> By 1994, after DR-DOS was pretty much dead, Microsoft had doubled the price of DOS. There was no alternative on the market. Like a classic monopolist, once it had eliminated competition, prices soared.

consumers does not change the fact that consumers are overcharged.[119] Nor does the fact that consumers do not pay for the software directly. In fact, there was a substantial increase in the 1990s and consumers do pay directly in the case of upgrades and for applications. This phenomenon does not apply only to the consumer PC market.

The centerpiece of Microsoft's pricing strategy has been to increase operating system prices at the same time that other components of the delivered PC bundle have been falling. As Microsoft conceded in evidence admitted in the trial,

> While we have increased our prices over the last 10 years other component prices have come down and continue to come down.[120]

Other evidence at trial gave explicit estimates of the price of operating systems. The average preinstalled price is given as $19 in 1990 and over $49 in 1996.[121] During that time span the average Microsoft revenue for preinstalled software rose from $25 to $62.[122]

Microsoft recognized that it has been the beneficiary of volume growth created by the falling price of the PC, which masks its increasing prices. Microsoft's increasing average sales price, combined with increasing sales volume, has fueled its rapid revenue growth.

> OEM division revenue growth over the last 8 years has depended heavily on volume increases and a trend to higher priced OS [Operating Systems]. During

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[119] Ferguson, p. 309,

> While there *are* new functions in Windows, the unit costs are spread over unit volumes that have increased dramatically, and that continue to increase perhaps 25 percent per year. Microsoft's average costs in marketing, distribution, and sales have also declined sharply. The steady increase in its unit volumes, the conversion from floppy discs to inexpensive CD-ROMs, and the shift toward PC preloading, Internet-based distribution, and high-volume corporate licensing agreements have all been driving down unit costs and driving up margins, for both Windows and Office. In fact, Microsoft profits have consistently increased much faster than its revenue over the last decade.

[120] Government Exhibit #365: Memorandum from Joachim Kempin to Bill Gates, dated Dec. 16, 1997, United States v. Microsoft, 84 F. Supp. 2d 9 (D.D.C. 1999) (Nos. CIV. A. 98-1232, 98-1233)..

[121] Government Exhibit #439: PC Value Analysis Cy 1990 – Cy 1996, Mar. 4, 1996, United States v. Microsoft, 84 F. Supp. 2d 9 (D.D.C. 1999) (Nos. CIV. A. 98-1232, 98-1233).

[122] Id.

> that time ASPs [average sales price] have stayed stable or have gone up which made it easier to ride the wave and get the value we deserve.[123]

Thus, one of the key elements in Microsoft's business model is to bury its products in bundles. This hides the price from the public and allows Microsoft to hide behind the declining price of the total package.[124] CFA has estimated that in the five years between the start of the anticompetitive attack on the browser in 1995 and the District Court finding of liability, Microsoft overcharged consumers by about $20 billion,[125] while the economic analysis of others suggests overcharges of as much as $30 billion.[126]

Of equal importance are the indirect costs imposed on the public. The trial record demonstrates, with extensive evidence, repeated instances in which Microsoft's anticompetitive practices have the effect of denying consumers choice. Microsoft forces computer manufacturers to buy one bundle with all of its programs preloaded. Products tailored to meet

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[123] Government Exhibit #365: Memorandum from Joachim Kempin to Bill Gates, dated Dec. 16, 1997, United States v. Microsoft, 84 F. Supp. 2d 9 (D.D.C. 1999) (Nos. CIV. A. 98-1232, 98-1233).

[124] Steady Pricing on Operating System Gives Microsoft Healthy Profit Window, PITTSBURGH POST-GAZETTE, at E-11.

> A paradox of technology is that as product performance goes up, price comes down. Except, that is, in the world of Microsoft Corp.'s Windows operating system. Everywhere else in the computer business, from chips to disk drives, entertainment software, to routers, prices have fallen—often sharply—as companies compete fiercely for market share.
> Competitor and industry analysts figure that Windows 95 sells for about $45 per copy to computer makers who buy in quantity. That is the same price or slightly more than the price of its processor. . . .
> Compare that with what has happened to the price of an Intel chip. Intel, like Microsoft, is the leader in its market. But, Intel has tougher competition which has been driving down chip prices. Intel introduced its first Pentium processor in 1993. It has a speed of 60 megahertz, contained 3.1 million transistors and sold for $877 in quantities of 1,000. The Pentium II chip came out in 1997, running at 233 megahertz speed and with 7.5 million transistors, the electronic switches that serve as the building blocks for chips. Pentiums sold for $636 for 1,000 chip blocks are its May introduction. Now the price is $236.

[125] Cooper, Mark, "Antitrust as Consumer Protection in the New Economy: Lessons From the Microsoft Case," *Hastings Law Journal,* April 2001 (4).

[126] Remedies Brief of Amici Curiae, United States v. Microsoft, 84 F. Supp. 2d 9 (D.D.C. 1999) (Nos. CIV. A. 98-1232, 98-1233).

individual consumer needs (consumer friendly configurations and small bundles) are unavailable.

As one prominent participant in the industry put it in linking the lack of innovation with the distortion of the competitive process to consumer harm.

> Furthermore, too much Microsoft software is just *bad.* With some justice, Microsoft can argue that it faces unique challenges—a huge number of users running a very large number of slightly different hardware platforms in an industry with an unusually high rate of technical change. But Cisco routers have most of those characteristics, and they work much better. It is also noteworthy how often freeware outperforms Microsoft's commercial products. . . .
>
> Microsoft's position as the monopolist purveyor of mediocre software is another source of large, and unnecessary, social costs. Training and recovery from software errors and crashes are, along with rapid version cycling, major contributors to service costs. . . . Conservative estimates are that the cost of maintaining a desktop is several times higher than the cost of purchasing it. Cleaner, simpler, better-designed software could reduce these overhead costs, thereby freeing large numbers of technologists to do useful work.. The generally accepted rule of thumb is that corporations spend three to five times their hardware costs on service. New hardware and software products must be installed, debugged and then serviced; employees must be taught how to use them. These costs increase greatly with the novelty and heterogeneity of systems in use; hence the more upgrade cycling, the higher these costs.
>
> Finally, there is Microsoft's effect upon potential and actual innovation. It is abundantly clear that any new entrant who creates a large market or a threat to Microsoft's monopoly platform position will be the object of a brutally effective, often predatory retaliation in which Microsoft will use every unfair advantage it possesses.[127]

Precise estimates of indirect costs such as these are always difficult to make. Ferguson's discussion suggests that hundreds of billions of dollars of consumer savings would result from a restoration of competitive processes in the industry. The reduction in direct costs resulting from the elimination of monopoly rents and excessive hardware costs are actually the smallest part of

[127] Furgeson, p. 311.

the potential savings.[128] Far larger are a more rational product cycle,[129] reduced support costs associated with less frequent upgrades and reduced instability[130] and reduced crash time.[131]

There is evidence that these practices are being extended to a broad range of consumer service providers in the new deals to project Microsoft's influence into e-commerce.[132] Furthermore, the e-commerce deals exhibit a range of licensing fees, transaction fees, advertising charges and royalties that are all paid to Microsoft by service providers, who then recover them

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[128]. Consider the following example calculation. Assume 100 million units shipped at an average hardware cost of $750 and software costs of $250. Ferguson estimates bloated hardware costs at $100 per PC. FERGUSON, *supra* note 115, at 310. Earlier, we had identified software monopoly rents in the range of $80 to $125 per PC. Assume a total of $200 savings per PC.

Current costs = $1,000/PC x 100 million PCs	=	$100 billion
Competitive costs = $800/PC x 100 million PCs	=	80 billion
Consumer Savings	=	20 billion

[129]. Continuing the example above, assume a 25% reduction in the product cycle.

Competitive costs = $800/PC x 100 million PCs	=	$80 billion
25% reduction in product cycle = $800/PC x 75 Million PCs	=	60 billion
Consumer Savings	=	20 billion

[130]. Ferguson uses a rule of thumb of support costs, primarily associated with upgrades, of 3 to 5 times the acquisition costs. *Id.* at 311. Assume the mid-point of 4 times. Further assume that support costs decline in proportion to the slowing of the upgrade cycle (25%).

Support costs = 4 x $100 billion	=	$400 billion
25% reduction in support equal cycle	=	300 billion
Consumer Savings	=	100 billion

[131]. Ferguson does not offer an estimate of the value of reduced crash time, he points out that other products work much better. The value of savings would be immense. For example, surveys show that consumers endure over 5 hours per month of down time due to crashes. Even reducing this by two hours per month would be worth approximately $100 billion dollars. *Id.* at 311.

2 hr/month x 12 x 300 million base = 7.2 billion hrs

Valuing each hour at $14 per hour Savings = $100 billion

[132]Edstrom and Eller, p. 163.

> Giving the RIP software away on the PC was a peculiar idea for Microsoft, since it would remove a revenue source for the company, but Microsoft could recoup revenues by licensing the more expensive server software, which would run on Microsoft NT servers. Microsoft could create and market the first server applications and provide electronic software distribution that would push hundreds of millions of dollars of products through its on-line network.
>
> Myhrvold argued that Microsoft could leverage Windows, making it the ubiquitous platform for these on-line services. Microsoft could also license the technology to other consumer platforms and convince hardware manufacturers to bundle and evangelize Microsoft's platform.
>
> The goal is that we would make this the number one way to connect to on-line services from Windows.

Kirpatrick, April 27, 1998 pp. 94...102.

> Every time you get or pay a bill delivered by its joint venture MSFDC, Microsoft will collect a few cents of the revenue...
>
> Ellis recalls that John Neilson, a top Higgins deputy no on leave from Microsoft, sat in his office saying Bill Gates wanted to know how he could get $100 for each car sold.

from the public.[133] Several of these arrangements seek to impose charges on a per transaction basis.

Nathan Myhrvold, Microsoft's chief technology officer, confirms that Microsoft hopes to get a "vig," or vigorish on every transaction over the Internet that uses Microsoft's technology, though he says in some cases Microsoft's share could come from a one-time software licensing fee. (Vigorish is a slang term used by bookmakers that means, roughly, the profit made for bringing bettors together.).[134]

Past overcharges cannot be recovered in a government antitrust prosecution, nor can innovations that were slowed or stopped be restored, but future abuse must be prevented. We are convinced that an effective remedy will trigger an explosion of innovation and economic activity from thousands of companies that have been shackled by the fear of retribution or expropriation by Microsoft. Unleashing these companies to innovate in a vigorously competitive market is the best way to stimulate economic activity and to put this industry on a solid long-term growth path. Settling for a short term fix, in the name of economic stimulus, that fails to address the underlying problem will create a chronic condition of underperformance, leaving the industry far short of achieving its true potential.

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[133] Edstrom and Eller, p. 164.

> A month later, on October 12 [1992], Myhrvold defined his message again. "Our business model for extracting revenue from this sort of information world comes in two parts – how we make money from IIVs (independent information vendors, or content providers) and how we make money from end users," Myrhrvold said

[134] Wall Street Journal, June 5, 1997, B-1.

VIII. A NEW THREAT TO CONSUMERS AND COMPETITION: WINDOWS XP/.NET

1. THE NEW CHALLENGE

These findings by the courts are especially critical because Microsoft is in the process of rolling out a new bundle of products —a new operating system, a browser upgrade and a wide array of applications and linked Internet services— which may be an even more ominous threat to competition and innovation in software and Internet services markets.[135] Microsoft's brazen disrespect for the antitrust laws is nowhere more readily apparent in the design of its newest bundle of products ("Windows XP," and the ".NET initiative," ("Windows XP/.NET")).[136] The

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[135] Buckman, Rebecca, "A Titan's Power – Potent Program: With its Old Playbook, Microsoft is Muscling Into New Web Markets Using Aggressive Bundling, It Roils High-Tech World with Windows Overhaul Some Gains for Consumers," *Wall Street Journal,* June 29, 2001.

> And this time around, Microsoft's bundling efforts in Windows XP are especially aggressive, some charge, as they lay the groundwork for a profound shift by the company into subscription services. Since the efforts involve services that can reach into all corners of the Internet, they are in many ways more expansive than Microsoft's earlier tactics of linking new desktop products to Windows.
>
> "The big play is to try to tie [all the new services] together into one gigantic universe. It makes some of the things they did in 1995 now look like child's play."
>
> Microsoft has always dealt with competition by linking new services to Windows, such as after Netscape Communications Corp. burst on the scene in the mid-1990s and forced Microsoft to build its own Web browser. Microsoft feared that Netscape's pioneering browser could become the main jumping-off point for computer use.
>
> One difference now is that Microsoft is bundling more features into Windows and not offering them as separate products.

[136] Galli, Peter, "State AGs Cite Microsoft's Troubling Behavior," *eWeek*, June 21, 2001; Erlanger, Leon, ".NET Intro," *Internet World,* March 15, 2001; The *San Francisco Chronicle,* May 13, 2001,

> Finally, some of the state attorneys general claim that with Windows XP, it's newest operating system, Microsoft is engaging in the same product 'bundling' that led to the current case. The Justice Department said Microsoft illegally bolted its Internet Explorer to Windows in an effort to squeeze Netscape out of the market. Windows XP incorporates software that lets users chat over the Web, play DVDs, and make CDs. Iowa Attorney General Tom Miller, who has coordinated the states' legal strategy in the antitrust case, told the Associated Press that Microsoft's behavior amounted to 'history repeating itself."

product is so blatantly at odds with the Court's ruling that it must have been designed on the basis of the assumption that Microsoft would prevail in its appeal.[137]

The extreme reliance of "Windows XP/.NET" on a huge bundle of entire applications and the continued reliance on contractual and technological bundling fly in the face of the Court's cautionary words . Windows XP and the .NET initiative are a bundle of services glued together by technological links (code embedded in the operating system), contractual requirements, and marketing leverage. The *Wall street Journal* captured the essence of the product bundle—it is expansive and seeks to cover virtually every activity in which a consumer may engage in on the computer. [138]

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[137] Gates, Bill, *Interactive Week,*

> Microsoft is moving ahead. We are continuing without any interruption based on what the court has ruled today. Nothing in today's ruling changes our plans for our future products, including Windows XP.

The issue, which seems lost on the company, is obvious to many in the industry, for example, Coursey, David, "Microsoft Didn't Really Win Yesterday – and Here's Why," *ZDNet.com,* September 7, 2001, put it as follows:

> Here's the Question: Microsoft has developed an operating system monopoly on the desktop. Should they be able to extend this dominance to mobile devices and Internet-based applications?

Wilke, John and James Bandler, "A Titan's Power – Shutter Bug: New Digital Camera Deals Kodak a Lesson In Microsoft's Ways – Trial Use with Windows XP Gave the Software Giant an Edge Photo Firm Says – Seeking a Digital Brownie," *Wall Street Journal*, July 2, 2001, comment on a dispute with Kodak as follows:

> The confrontation hints of antitrust battles to come, as other companies grasp the reach of Microsoft's plans for the coming new version of its operating system, Windows XP, and its ambitious plans for the Internet. From photography to phone service, music to banking, companies across the economy have been waking to find Microsoft riding its operating system into their markets – even as it was waiting for the outcome of the landmark antitrust case. Microsoft targeted RealNetworks Inc., the pioneer of music and video on the Internet, and AOL Time Warner Inc., in the booming market for instant messaging, with much the same aggressiveness it once used in going after Netscape, in the browser battle that led to the antitrust case.

[138] Buckman, Rebecca, "A Titan's Power – Potent Program: With its Old Playbook, Microsoft is Muscling Into New Web Markets Using Aggressive Bundling, It Roils High-Tech World with Windows Overhaul Some Gains for Consumers," *Wall Street Journal,* June 29, 2001.

> Microsoft has plunged into the Web in a big way. Its broad new Internet initiative is inextricably linked with its core software product, Windows. And many services for consumers, such as music subscriptions or online calendar services, will require people to use new features that are embedded in Windows. These new services will also link them to existing software products already in Windows, such as the company's Word program or Outlook, which offer e-mail and a calendar service now...

The software, applications, and services that Microsoft has bundled covers all of the functionalities that are converging on the Internet including the following:[139]

Communications
- E-Mail (Hotmail)
- Messaging (Microsoft Messenger)

Commerce
- Identity Verification (Passport—names and addresses)
- Utilities (e.g. Calendars, Contact Lists)
- Transactions (e.g. documents, payment records)

Applications
- Music (Media Player 8)
- Video (Media Player 8)
- Digital Photography (My Pictures)

Internet Services
- MSN

Today these Internet activities are vigorously competitive, just as the browser was before Microsoft launched its attack. In other words, the anticompetitive and illegal business practices Microsoft used to win the browser war are being extended to virtually every other application

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Consumers, however, will find that Windows XP contains hooks that could drive them to Microsoft's own Internet services, rather than competitors. Those hooks also lay the groundwork for the company to collect more of its revenue through recurring subscription fees – instead of one-time software sales or licensing agreements, which may not prove as profitable in the Internet age.

At the top of the list: the embedded instant-messaging feature, dubbed Windows Messenger, as well as a new, Microsoft designed digital music and video player in Windows XP. And Passport, the "single sign-in" Web-registration service that stores credit-card information and passwords, will underpin a range of new consumer services that Microsoft has named "Hailstorm."

HailStorm services are dependent upon many of the same new Internet computer standards that underpin Microsoft's wider Internet initiative, which it calls Microsoft.NET.

Perhaps most important, Passport is required to use Microsoft's sophisticated new Widows Messenger software. That messaging system is bundled into Windows XP.

[139] Electronic Privacy Information Center, et al, "Complaint and Request for Injunction, Request for Investigation and Other Relief," *In The Matter of Microsoft,* Federal Trade Commission, July 26, 2001 (hereafter, EPIC Complaint), "Supplemental Materials in Support of Pending Complaint and Request for Injunction, Request for Investigation and Other Relief," *In The Matter of Microsoft,* Federal Trade Commission, August 15, 2001 (hereafter, EPIC Supplemental).

that consumers use. Microsoft has now launched an "applications war" leveraging its operating system, browser and desktop monopolies. [140]

2. THE ANTICOMPETITIVE ESSENCE OF WINDOWS XP/.NET

In a sense, Microsoft's design and deployment of "Windows XP/.NET" is nothing new. A familiar set of tactics is being re-employed to help maintain Microsoft's monopoly in operating systems and now Internet browsers, by "handicapping" another generation of "products with potential to ultimately erode that monopoly." [141] Microsoft's own description of the "Windows XP/.NET" strategy leaves no doubt that this is what the bundle does. [142] Microsoft declares this set of software programs and services as "the next generation of the windows

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[140] Concerns are not limited to only these markets. For example, the effort to capture the wireless market involves the following (Coursey, David, "How Microsoft is Planning to Conquer the Wireless Industry, Too," *ZDNet.com*, August 30, 30, 2001:

> The pitch Microsoft is making to hardware vendors and wireless service providers is a simple one" "If you want access to Microsoft customers, then use Microsoft software for your hardware devises and networks."
> The reason I felt some déjà vu is because what Microsoft wants to do to mobile computing is merely an update of how it took control over the desktop...
> If successful, Microsoft will have marginalized both the hardware and wireless services providers, and made software and content the center of your mobile computing experience, just as it is on your desktop.

The European Union has also launched an investigation into Microsoft that covers the server market, see "European Union Expands Antitrust Probe of Microsoft," *Associated Press,* August 30, 2001, Mitchener, Brandon and Ted Bridis, "Microsoft Faces New Allegations From Europe," *Wall Street Journal,* August 31, 2001,

> The commission said it believes Microsoft may have withheld information regarding compatibility with its ubiquitous operating systems from manufacturers of competing server software. Sun Microsystems Inc., which sells both servers and software has accused Microsoft of doing just that in a bid to encourage purchases of both PCs and servers running Microsoft software.
> The Washington, D.C.-based Computer and Communications Industry Association, of which Sun is a member, said Microsoft's share of the world-wide market for server operating systems has risen to 41% and was approaching 60% in the market for low-end servers used for managing printing and hosting Web pages.

[141] *PC Magazine,* April, 16, 2001,

> If you end up running Windows XP, you'll see how the operating system has consumed practically everything around it. What were previously standalone applications are now OS features.

[142] "The Redmond Menace: Microsoft With Everything At Stakes, Is Gambling Its Future on Controlling the Net The Way It Did PCs," *The Industry Standard,* April 20, 2001.

desktop platforms. An operating system for the internet... with one infrastructure for developing for it."[143] The bundle is built on commingled code,[144] proprietary languages,[145] and exclusive functionalities[146] that are promoted by restrictive licenses,[147] refusal to support competing applications,[148] embedded links,[149] and deceptive messages.[150]

Leveraging both the operating system monopoly and the newly acquired browser monopoly, Microsoft aims to drive communications through proprietary e-mail and, more importantly, messaging technology.[151] This new communications technology will provide a new

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[143] Holland, Maggie, "Microsoft Users Face .NET Lock-In," *Computing,* March 22, 2001. *Web Services, an Interview with Robert Hess*, March 19, 2001.

[144] The distinction between technological bundling and contractual bundling presents complex analytic questions that provided some of the most dramatic courtroom incidents as various experts sparred over how code could be removed and what impact that would have on the functionality (John Heilemann, *Pride Before The Fall* 181-86 (2001). The Project to Promote Competition and Innovation in the Digital Age, alleges a great deal of commingling of code (see *Microsoft's Expanding Monopolies: Casting a Wider .NET,* May 15, 2001, and to a lesser extent *Passport to Monopoly: Windows XP, Passport, and the Emerging World of Distributed Applications*, June 21, 12001), which appears to be supported by the journalistic discussion of embedded applications.

[145] Microsoft's proprietary run time environment pervades Windows XP and its browsers, ("Runtime Hosts," *Microsoft .NET Framework Developers Guide,* Microsoft, 2001.

[146] Markoff, John, "Breaks in Talks Between AOL and Microsoft," *"New York times,* June 17, 2001,

> Talks End after AOL officials said they could not agree to Microsoft's demand for effective exclusivity of its music software.

[147] At a minimum, the restrictive licenses are the subject of the dispute over placement of icons (see Bass, Dina, "Microsoft Requires PC Makers to Put MSN With Links," *Bloomberg*, July 27, 2001; Clark, Don, "Microsoft Broadens Rules for PC Makers," *Wall Street Journal,* August 9, 2001).

[148] While Microsoft advances it run time environment, it has pulled back on support for competitors, see Wilke, John, and Don Clark, "Microsoft Pulls Back Is Support for Java: New Windows XP System Won't Include Software Needed to Run Programs," *Wall Street Journal*, August 9, 2001; Copeland, Lee, "Sun Lashes Out at Microsoft for Javaless Windows XP," *ComputerWorld,* August 27, 2001.

[149] Bass, Dina, "Microsoft Requires PC Makers to Put MSN With Links," *Bloomberg*, July 27, 2001.

[150] Electronic Privacy Information Center, *Complaint and Request for Injunction, Request for Investigation and for Other Relief,* July 26, 2001.

[151] Markoff, John, "Microsoft is Ready to Supply a Phone in Every Computer," *New York Times,* June 12, 2001; *Gartner Examines Microsoft versus America Online Impending War in Instant Messaging and Web Services Space,* May 1, 2001,

> The real value of instant messaging lies not in the advertising potential of the platform, but in the strategic connection to Web services. Microsoft's Web services foundation, code named Hailstorm, will enhance instant messaging with Web services, most importantly, private identity tools to enable instant commerce, such as stock trading, purchasing and even corporate procurement in real time.

platform for a wide range of new applications.[152] There is no doubt that this is a computing platform.[153] This creates the cornerstone of an illegal defense of the monopoly in the operating system and the browser markets.

Microsoft knew that the browser would be the principal interface between the PC user and the Internet. That is why it brutally sought to capture that market functionality to prevent it from "commoditizing" the operating system. It now proposes to use the existing monopolies in operating systems, browsers and office suites, to capture the consumer and vendor interfaces for the next generation of computing, controlling communication, identify verification,[154] and driving its proprietary languages into the interface between vendors and the Internet.[155] The clear attempt to leverage its existing monopolies in the PC operating environment to frustrate potential competition from Internet,[156] or distributed computing,[157] relies on the same

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[152] Fortt, Jon, "Battle Rages for Future of Instant Messaging," *Siliconvalley.com*, January 12, 2001, quotes Bob Visse, Project Manager for Microsoft Network as follows:

> The way I look at instant messaging is, it is a platform for all these different types of rich communications. I consider it very critical.

[153] "Bill Gates Unplugged," *Redherring.com*, September 2000, ".NET is a Microsoft platform. Just like the Windows platform." "Letter for Gerald Waldron to Magalie Roman Salas," *In the Matter of Applications of America Online, Inc. and Time Warner, Inc. for Transfer of Control,* Federal Communications Commission, CS Docket No. 00-30, October 13, 2000,

> IM is not just an application but a real time messaging platform that can be utilized by many different applications. IM, with its presence detection features, is a critical platform for the current and future generation of communications and distribution of content over the Internet.

[154] Cooper, Charles, "Allchin Bangs the Drum for XP," *ZDNet News,* August 29, 2001,

> I want to talk about what's in Windows XP and what it talks to on the back end. There are meta-Internet services we talk about which we consider to be pretty fundamental, architecturally, for building and making the Internet a little easier for people to use. Authentication and presence – in the future, we may have others – both those two, for the present, are core. And we're trying to support both of those in Windows XP.

[155] Foley, Mary Jo, "Microsoft's. NET: Integration to the Max," *ZDNet News*, June 22, 2000, quote Steve Ballmer, Microsoft's CEO and President,

> We are taking elements of the user interface and programming model, and nicely and tightly integrating them, first into the client, and then into the server.

[156] Thurrott, Paul, "Microsoft Responds: Win2K is the Cornerstone of .NET," *Windows 2000 Magazine,* November 7, 2000,

> the role that the Windows platform played in the past and the role it plays in the future is absolutely the same. Today we have a world of applications and Web sites, and we think of those as two different worlds. With .NET, they become one.

anticompetitive business and technology practices. It also targets a wide range of activities that consumers are likely to conduct on the Internet.[158]

With the launch of Windows XP, Microsoft is for the first time requiring software developers to "pre-certify" the launch of their software with Microsoft.[159] Instead of simply writing a piece of software and placing it on the market, developers must now go through Microsoft to ensure "compliance" in the name of the stability of the XP platform. One does not have to be terribly creative to imagine how Microsoft could use this to disadvantage third party software that threatens to compete with their business.

Moreover, with "Windows XP/.NET" Microsoft's monopoly leveraging gets personal, through an identity authentication service called Passport. Microsoft has declared, "all Windows users will get a Passport."[160] This identity authentication service aims to build a massive proprietary database of personal information and transactional details by leveraging the old monopolies in operating systems, the browser, and office applications. Microsoft is using its monopolies to fend off potentially competing applications, while it migrates it market power to a

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[157] *Network World,* April 16, 2001,"Microsoft is shooting for the same degree of dominance in Web computing that it had in the client/server model."

[158] Mossberg, Walter, *Wall Street Journal,* May 17, 2001,

> There's also a dark side to Office XP. Microsoft is planning to try to sell a wide variety of Web-based services, and this new version of Office is partly designed to help the company peddle them... Not only that, but many of these Web enabled services enabled by Smart Tags will likely require you to sign in with a Microsoft-owned authentication system called Passport.

[159] Vaughn, Steven, "Resisting The Windows XP Message," *ZDNet*, May 9, 2001; *Smart Partner ZDWire*, May 8, 2001,

> Then there's the requirement that all software be signed with a Microsoft-approved bit of code. MS has said that will be the case with device drivers, but is unclear whether apps will need to be signed too. A Microsoft source tells me they will be. While that certainly will cut down on viruses, I can't help but wonder if you or independent software vendors will have trouble getting that all-important signature for your program. Will you need to recompile any program you write with a Microsoft complier to be registered to work with XP? If your vendor has a product that competes with an MS project, will they have trouble getting a signature? What about your favorite cheap utility? Will it get a signature?

[160] Ballmer, Steve, *PC World.com,* March 13, 2001. As Bill Gate put it (*Seattle Times,* March 2001), p. "It's our goal for virtually everybody who uses the Internet to have one of these Passport connections,"

new source, just as it used the operating system to gain control of the browser market. Microsoft is creating an entirely new basis of market power that would reside in the control of personal information, which would augment its market power over operating system code.

When Microsoft's massive data gathering plans came to light, its privacy policy was revealed to be extremely consumer-unfriendly. It hastily modified the policy, [161] but retains the right to change that policy at any time. It refuses to require consumer-friendly policies for its partners, with whom it will share the data. It refuses to remove the information it has gathered on consumers for a year after the consumer has withdrawn from its identity authentication service.

After the Court of Appeals ruling, Microsoft said it would allow its browser to be removed by computer manufacturers.[162] The initial announcement was unclear on the removal of other software products, like Media Player. The court ruling outlaws the practice in general. When computer manufacturers began to make deals to preinstall competing software, Microsoft backtracked, adding in new restrictions to create a disincentive for computer manufacturers to actually load competing programs and ensuring that Microsoft products had an advantage.

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[161] Phan, Monty, "Microsoft Revises 'Passport"/But use of Web users' info remains an issue," *Newsday,* April 2, 3001, A57.

[162] *Microsoft Announces Greater OEM Flexibility for Windows*, Microsoft Press Release, July 11, 2001; Krim, Jonathan and Ariana Eujung Cha, "Microsoft to Let PC Firms Change Windows Setup," *The Washington Post,* July 12, 2001; Lohr, Steve, "Microsoft to Give Computer Makers Greater Freedom," *New York Times*, July 12, 2001; Buckman, Rebecca, "Microsoft to Require Posting of MSN Icon," *Wall Street Journal,* July 30, 2001; Bass, Dina, "Microsoft Requires PC Makers to Put MSN With Links," *Bloomberg*, July 27, 2001; Clark, Don, "Microsoft Broadens Rules for PC Makers," *Wall Street Journal,* August 9, 2001; Chu, Showwei, "Microsoft Hints at Further Concession," *The Globe and Mail*, suggests the fundamental position of Microsoft throughout was to ensure that its products never lost their advantage of location on the screen,

> Microsoft plans to include its instant messaging service, MSN messenger, and an updated version of its Media Player – software that delivers on-line video music – in the release of its new operating system, Windows XP, in October.
> "Ours will be there," he said. "What I can't tell you... is what are going to be the other components. That's going to be part of the discussion going forward.

Microsoft also included a feature in "Windows XP/.NET" "Smart Tags," that would write links into any web page a consumer was viewing that would direct the consumer to Microsoft's own and affiliated products and services, by simply clicking on a word on the third party's web page.[163] In other words, Microsoft was editing the content of competing web pages. After a furor, Microsoft backed off, but only because it did not have enough time to work out an alternative. It insists on its right to include those links in the future.[164] Obviously, with Windows XP/.NET, Microsoft is up to its old tricks[165] in an effort to slip its anticompetitive practices past the courts and the public.[166] This is the old game of cat and mouse to see what it can get away with.

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[163] Mossberg, Walter, "Dangerous Detours: Windows XP May Add its Links to Others' Sites," *Wall Street Journal,* June 7, 2001, B1, "Uproar Over Planned Smart Tags Feature Threatened to Cloud October Launch of Windows XP Operating System" *Wall Street Journal,* June 28, 2001; "Smart Tags Link to Another Microsoft Controversy, *USA Today*, June 8, 2001. Mossberg, Walter S., "Microsoft Backs Off Plan to Add its Links to Other's Web Sites," *Wall Street Journal,* June 28, 2001,

> Microsoft continues to defend the Smart Tag idea in principle, and the company plans to work toward including it in a future release of Windows or of the browser, in some more acceptable form...

[164] Wilke, John and James Bandler, "A Titan's Power – Shutter Bug: New Digital Camera Deals Kodak a Lesson In Microsoft's Ways – Trial Use with Windows XP Gave the Software Giant an Edge Photo Firm Says – Seeking a Digital Brownie," *Wall Street Journal*, July 2, 2001, report a similar incident with Microsoft's foray into online, digital photography

> When Kodak cameras were plugged into a PC loaded with Kodak software, it was Microsoft's own photo software that popped up – not Kodak's. Camera customers would have to go through a cumbersome process to get Kodak's software to pop up every time, and most would probably just use Microsoft's.
>
> More troubling, the Kodak team found that the new program steered orders for picture prints to companies the would have to pay to be listed in Windows, and that these companies would also be asked to pay Microsoft a fee for every photo sent through Windows.

After complaints to antitrust authorities, Microsoft changed the add/remove sequence, keeping its product as the default, but making a one-click list for alternatives. It continues it "plans to charge a per-photo fee for images that are sent through Windows to Microsoft's partners."

[165] *The Economist*, April 28, 2001,

> In particular, it plans to use Windows XP to ensure that .NET, its new strategy for delivering software as subscription-based web services, quickly gains a critical mass of users. Microsoft is also using Windows XP to push its own music-playback software and its own new proprietary music files. In other words, Microsoft is up to all its old tricks again.

[166] The indignation of one Wall Street Journal pundit at Microsoft's "Smart Tags" is palpable, and sets the whole bundle in context.. See, Mossberg, Walter S., "Microsoft Backs Off Plan to Add its Links to Other's Web Sites," *Wall Street Journal,* June 28, 2001.

> Some at Microsoft, and elsewhere, couldn't see the problem. After all, they said, Microsoft wasn't hacking into people's servers and rewriting their Web sites. It was merely adding a useful tool, similar to "annotation" programs offered by firms like Atomica and NBCI

3. SPECIFIC ELEMENTS OF THE WINDOWS XP/.NET BUNDLE THAT VIOLATE ANTITRUST LAW

With "Windows XP/.NET" Microsoft continues to impose anticompetitive restrictions that bias computer manufacturers and consumers against non-Microsoft products. It is only because it has monopoly power over the operating system that it can exercise this market power against competing applications software and services.[167]

> But this reasoning ignores the fact that Microsoft's dominant Internet Explorer browser is like a television set, or a digital printing press, for the World Wide Web. Its function is to render – accurately and neutrally – all Web pages that follow standard programming. By virtue of its near-monopoly, position in the browser market, Microsoft has a moral obligation to assure that readers can see Web pages as they were published, without alteration.
>
> The decision on which words should be turned into links, where and when such links should appear, and where the links would take readers is an editorial and business decision that belongs solely to the creator and owner of a Web site – not to Microsoft or even the reader.
>
> Using the browser to plant unwanted and unplanned content on these pages – especially links to Microsoft's own sites – is the equivalent of a printing company adding its own editorial and advertising messages to the margins of a book that it has been hired to print. It is like a television-set maker adding its own images and ads to any show the set is receiving.
>
> Microsoft has a prefect right to produce and sell its own Web content with it own points of view. But it is just plain wrong for the company to use the browser to seize editorial control and to steal readers from other sites. The company's Web businesses should stand on their own in the marketplace.
>
> While the infringement of commercial free speech rights that the *Wall Street Journal* sees in this practice may be a constitutional issue, the proposition that Microsoft's web businesses should stand on their own in the market place is an antitrust issue. As the discussion below demonstrates, the use of the Microsoft operating system or any of its other monopolies to leverage its products into other markets with a wide range of practices (including and beyond Smart Tags) should be met with the consumer indignation and prosecutorial resistance because they distort the competitive process. There is no sense in which Microsoft's new products stand on their own in the marketplace. They are propped up and pushed by the underlying monopolies. All are illegal business practices intended to steal customers.

[167] As noted above, pricing was analyzed as a general indicator of monopoly power as well as a source of subsidy for anticompetitive activities. Pricing has received some attention in the early stages of the rollout of Windows XP, with complaints about both the price level and the new activation policy. Mossberg, Walter, S., "The New Windows: Best Yet, But beware, Windows XP Rarely Crashes but Acts as a Trojan Horse to Tout Microsoft Services," *Wall street Journal,*

> Not only that, but Windows XP is expensive. Although the $99 does not sound bad, the "activation" system will force home users, for the first time, to buy a separate copy for each PC they own. Microsoft is planning a multi-PC discount for home users, but it will be small.

These concerns about pricing and licensing practices have led to an uproar in the business community with a shift in licensing that constitutes a major increase for many enterprises (see Buckman, Rebecca S. "Microsoft Plan for Licenses Sparks Gripes," *Wall Street Journal,* September 25, 2001; Wilcox, Joe, "Microsoft Customers Balk at License Changes," *CNET New.com,*" September 20, 2001.
Details of pricing for computer manufacturers are still shrouded in secrecy, as they typically are.

i) Computer Manufacturers

Microsoft continues to impose restrictions on its licenses that bias computer manufacturers to not install non-Microsoft products. [168] Microsoft offers one bundle with all programs included. Computer manufacturers have no choice but to take this entire bundle because there are no viable competing operating systems. Microsoft has a monopoly, as the Courts have now found.

Microsoft insists on equal or superior location for its products if a competitor is shown on the desktop. Further, Microsoft insists on being paid for all the programs, regardless of whether the computer manufacturer wants to use them all. The Court of Appeals suggested that offering different bundles at different prices does not constitute an unlawful tying arrangement, even for a monopolist. [169] As a result of the combination of pricing and onscreen restriction, non-Microsoft products are forced to pay for space that Microsoft gets for free.

In essence, Microsoft requires computer manufacturers to either keep the screen "clean" with only a few Microsoft-only Icons, or to clutter the screen and hard drive by presenting both Microsoft and non-Microsoft products. [170] Manufacturers are prohibited from presenting an uncluttered screen with non-Microsoft products only. Since manufacturers are forced to take the entire Microsoft bundle and must include Microsoft products whenever they include a non-Microsoft product, they are discouraged from installing non-Microsoft products.

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[168] Wilcox, Joe, "Want Media Player 8? Buy windows XP," *CNET News.com,* April 24, 2001,
> "The biggest impact of including Windows Media Player is going to be, as we've seen time and time again, on the third party software developers who produce utilities that get sucked into the operating system,"
> PC makers would not comment on product plans, but several said that given declining sales they would do what economically makes the most sense. Because PC makers already pay a license fee for Windows XP, it's likely they would favor using the bundled Media Player 8 over other products that must be licensed at additional cost.

[169] *Appeals,* p. 90.

[170] Cooper, Charles, "Allchin Bangs the Drum for XP," *ZDNet News,* August 29, 2001. Although Microsoft claimed that the desktop could be "clean" or cluttered with Icons, its version of clean included Microsoft Icons.

The Court of Appeals was quite strong in this regard in upholding the District Court.[171] It found that virtually all restrictions on computer manufacturer control of the start sequences and screen presentation to be anticompetitive. While computer manufacturers cannot make the operating system's presence be hidden entirely,[172] they should have complete flexibility to place and set of Icons (Microsoft or non-Microsoft) in any location or launch in any sequence that they choose.

ii) Consumers

Microsoft also biases consumer choices by leveraging its market power over the operating system.[173] Microsoft imposes restrictions on its licenses that require its programs to launch automatically and/or require its programs to be the default option. Non-Microsoft programs cannot enjoy these advantages, which makes them more difficult for consumers to find and use. The restrictions bias consumers toward Microsoft products and against non-Microsoft products.

Microsoft uses its operating system and browser monopolies to repeatedly prompt consumers to choose Microsoft programs.[174] Competitors cannot enjoy similar prompts.

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[171] *Appeals,* pp. 29-36.

[172] They could allow consumers to choose which operating system they want to invoke, however, see Hacker, Scot, "He Who Controls the Bootloader," *Byte.com,* August 27, 2001,

> There is no technical reason why CompUSA customers shouldn't be able to walk out of the shop with a machine that asks "Which OS do you wan to use today?" upon boot. And yet, even today, after several years of relentless news about how Linux is ready for the general desktop and business customer, one does not find dual-boot Win/Linux machines from large commercial OEMs at any consumer outlet or web shop I know of. Yes, you can get dual-boot machines at some of the smaller shops, but these are the ones that slip under Microsoft's radar, and there's no guarantee that Microsoft won't decide to take action against these vendors at some point. And yes, you can buy Linux-only machines from vendors such as IBM. But think about it: Why would IBM sell Windows machines and Linux machines, but not dual-boot Win/Linux machines.

[173] Associated Press, May 12, 2001.

> It's the same game they played with (Internet) Explorer. If it's sitting there and it's built in and you have to put a lot of work in to use another product, you don't do it.

[174] Mossberg, Walter, S., "The New Windows: Best Yet, But beware, Windows XP Rarely Crashes but Acts as a Trojan Horse to Tout Microsoft Services," *Wall street Journal,*

Microsoft has built biases into the list of frequently used applications that give an advantage to Microsoft applications. Add/remove sequences are difficult and confusing for bundled Microsoft applications.[175] Microsoft sweeps icons off the desktop. Combined with the list bias and the add/remove bias, this results in Microsoft programs being more likely to be found and easier to use. Finally, Microsoft has embedded links to Microsoft products and partners.[176]

It should be stressed, that none of these restrictions are technologically necessary.[177] Screen bias, list bias, and add/remove bias are all business practices Microsoft uses to undermine competing programs. Computer manufactures can present uncluttered screens with non-Microsoft products just as easily as they can present uncluttered screens with Microsoft only products. They can have non-Microsoft products launch automatically or be the default options. Add/remove sequences can be neutral with respect to any piece of software. The marketplace of

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The company has also turned Windows XP with into a sort of Trojan horse. It has built in a bunch of "features," such as instant messaging, online photo printing and a "passport" to the Web, that are just blatant efforts to lure consumer into using a set of new Web-based services Microsoft is launching, while ignoring alternative services that may be better. The goal seems to be to trap users in a Microsoft company store of sorts.

[175] Mossberg, Walter, S., "The New Windows: Best Yet, But beware, Windows XP Rarely Crashes but Acts as a Trojan Horse to Tout Microsoft Services," *Wall street Journal,*

"You can also now hide those pesky icons on the lower right of the screen that you rarely use – those XP doesn't make it any easier to uninstall them.

[176] Mossberg, Walter, S., "The New Windows: Best Yet, But beware, Windows XP Rarely Crashes but Acts as a Trojan Horse to Tout Microsoft Services," *Wall street Journal,*

Unfortunately, Microsoft pollutes this nice design by adding tasks that seem designed to keep you in the company store. A task for sending your pictures to an online photo-printing service lists only services that pay Microsoft. A task for buying music online leads only to a Microsoft site.

[177] Smith, Davie and Chris Le Tocq, "Commentary: Hailstorm's Consumer Focus," *Gartner Viewpoint, CNET News.com*, March 20, 2001,

Microsoft regards Passport as a key leverage point and will use its own established platform dominance to drive exclusive usage. Hailstorm does not require windows platforms or Windows XP, but both Windows XP and Office XP will provide a level of convenience for users and will drive use of Hailstorm services. Windows XP will use Passport exclusively for its identity service... Windows could use a UDDI look-up to allow selection from competing identity services. Microsoft has chosen not to do this.

the computer screen could be scrupulously competitively neutral – a level playing field. Instead, Microsoft has tilted the field in their favor through onerous licensing restrictions.

The insertion of Smart Tags into web content was only one of several ways in which Microsoft sought to leverage its monopoly power to direct consumers to its proprietary products and services, or those of its partners. Embedded throughout the bundle are links that direct consumers to Microsoft's Internet services and products.

iii) Technology Practices Affecting Software Developers

Microsoft has applied a series of technology practices that undermine competition. Microsoft seeks to impose exclusivity through code and or contracts on applications and software.[178] It seeks to require applications and programs to seek certification to interoperate, thereby gaining control over technology development.[179]

In contradiction of the Court of Appeals ruling, Microsoft has commingled code throughout "Windows XP/.NET."[180] The Internet Explorer browser is hardwired into the

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[178] Klein, Alec, "Microsoft, AOL Clashed Over Media Player," *Washington Post*, June 21, 2001, describes Microsoft efforts to impose contractual conditions that restrict the ability of competitors to be visible or reach the marketplace, which parallel quite closely the conditions targeted at the browser.

> In one proposal, Microsoft wanted to prevent AOL online subscribers from using RealNetworks' RealPlayers software in Windows XP. "any third party code or functionality shall not be in a form accessible or utilizable by other applications or consent," states a Microsoft draft dated June 14. After a conference call with Microsoft engineers that day, an AOL software engineer wrote an e-mail to an AOL negotiator that Microsoft's proposal was meant "to prevent the user from using the standalone RealPlayer when the player is installed by AOL."
> That would have required AOL to "hide Real's program file folder" and other icons that link the consumer to RealPlayer, according to the e-mail....
> As part of the negotiations, the Redmond, Wash., software maker also wanted AOL to guarantee that 50 percent of the music and audio content played on the AOL Internet service in Windows XP would be done through the Windows format, according to source close to AOL.

[179] Vaughn, Steven, "Resisting The Windows XP Message," *ZDNet*, May 9, 2001; *Smart Partner ZDWire*, May 8, 2001,

[180] Fester, Dave, *CNET News.Com*, May 1, 2001.

> We're not going to offer another version of the Media Player that strips out all that functionality that's exposed to your PC in Windows XP. In Windows XP, the underlying core of the operating system offers these new levels of functionality.

operating system. Microsoft's Messenger is hardwired into XP.[181] Numerous other programs are hardwired into the bundle including the Media Player, Dialer, Outlook Express, and Hotmail.[182] Some of these have been hardwired in earlier versions of the operating system, but that does not make that legal. In fact, the Court of Appeals set out to clarify past rulings, which it felt might have sent an unclear message about technological integration.

In a repeat of past actions against competing software, Windows XP will not fully support critical applications from competing suppliers while it promotes Microsoft's proprietary

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[181] Buckman, Rebecca, and Julia Angwin, "Microsoft, AOL Battle on Windows XP, Talks on Online Deal Falter As Software Maker Plans Instant-Message Feature," *Wall Street Journal,* June 4, 2001,

> Intensifying the conflict between the companies, Microsoft today will unveil plans to bundle a new instant-messaging service into Windows XP, a bold stroke by the software maker to lure users away from one of AOL's most popular services. For the first time, Microsoft will hard-wire the service into Windows, giving Microsoft a potential edge in the battle with AOL.

[182] Chase, Steve, "Microsoft's Media Mission, Software Giant Plans to Tie New Multimedia Tool to Windows, But Rivals in Player Wars Slam Move as Anti-competitive," *Globe and Mail,* May 3, 2001.

> Available exclusively with XP will be Windows Media Player 8, a souped-up version of earlier stand-alone players that allows users to "burn" audio or video onto compact discs or watch digital videos on their computers.
>
> Very few of Payer 8's features break new ground, but packaged together they provide a daunting competition for rival software from smaller companies. The older Windows Media Player 7 will still be available as a separate free download.
>
> Bundling Media Player 8 with Windows CP has set off alarm bells with Microsoft critics, who are wary of the company's tactics after it overpowered Internet browser rival Netscape Communications Corp. by tying its own Internet Explorer to the Windows OS in 1996. Because Windows is the software that operates almost 90 per cent of the world's PCs, any additional programs bundled with the OS on new computers can effectively swamp the competition.

Wilcox, Joe, "Want Media Player 8? Buy windows XP," *CNET News.com,* April 24, 2001.

> Some analysts are critical of the move, considering the legal and public relations troubles that were caused by tying Internet Explorer to the OS...
>
> Repeating the company's argument for bundling Internet Explorer with Windows, a Microsoft representative said Media Player 8 included new features that require close integration with Windows XP for optimal performance.
>
> "There are some features with Widows Media Player that can only be delivered with Windows XP," said Jonathan Usher, Microsoft's group product manager for Windows Media Player. These include CD burning and DVD movie playback, among other features not available with earlier versions of the product.

Mossberg, Walter, S., "The New Windows: Best Yet, But beware, Windows XP Rarely Crashes but Acts as a Trojan Horse to Tout Microsoft Services," *Wall street Journal,*

> Unfortunately, this is another case where Microsoft places it business interests above consumer choice. The messaging function connects to Microsoft's own messaging network only, not he larger and more popular AOL messaging system.
>
> Not only that, but you can't use the messaging feature without signing up with Passport, Microsoft's service that aims to collect names and passports for everyone on the Internet.

offerings.[183] In other words, the operating system is being manipulated to make competing software less attractive.[184]

Windows media player will not fully support RealPlayer format.[185] Windows media player will not support ripping of MP3 format.[186] In other words, if you want to record music, you must use Microsoft's WMA format.[187] Content (music and videos) created in Microsoft

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[183] Mossberg, Walter, S., "The New Windows: Best Yet, But beware, Windows XP Rarely Crashes but Acts as a Trojan Horse to Tout Microsoft Services," *Wall street Journal,*

> It is somewhat suspicious that software from some of Microsoft's fiercest rivals just happened to be partially disabled in some way by windows XP, requiring those companies to scramble to offer patches. ..
>
> Some programs, including antivirus and firewall software, will need to be replaced entirely with newer versions. Many DVD players will also have to e updated.

[184] Swisher, Kara, "Microsoft Charts New Course, But is it the Right Approach?" *Wall Street Journal,* March 26, 2001,

> No surprise, hailstorm works better with Microsoft's dominant products, integrated with software applications and based on existing free Microsoft services like Passport.

[185] Graham, Jeffrey, "Windows Media Promise, But Snafus Remain," *USA* Today, May 26, 2001:Helm, Kristi, *Mercury News Seattle,* quoting Henry Blodget, Merryl Lynch analyst,

> We continue to believe there is a significant risk that Microsoft will do to RealNetworks what it did to Netscape – take over the market by bundling functionality in larger products and giving it away for free.

[186] Hansen, Evan, "Windows XP and MP3 May Not Mix," *CNET News.com,* June 12, 2001,

> Test versions of the new operating system have alternatively included and excluded an encoder, or "ripper," that would allow people to convert audio tracks from CDs to the MP3 format, according to Windows XP product Manager Tom Lammel...
>
> Even if the company does include an MP3 ripper, it is likely to be a version that does not produce high-quality copies because the cost would be prohibitive to the company, Lammel said...
>
> Although previous versions of its operating system have supported MP3 rips from other companies, Microsoft's own audio and video software, Windows Media Player, has converted files only the Windows media format, dubbed WMA.
>
> Lammel said an early test version of Windows XP included a riper, but it has been dropped from the most recent beta.

Mossberg, Walter, S., "The New Windows: Best Yet, But beware, Windows XP Rarely Crashes but Acts as a Trojan Horse to Tout Microsoft Services," *Wall street Journal,*

> It's the same story with Windows XP's new Media Player, which plays music and videos. The program is much improved, and Microsoft's proprietary music format, WMA, is a very good competitor to the widely used MP3 format. But while the Media Player can play MP# files, it can't create them unless you download an extra-cost "plug-in" from a third-party company. It can create only WMA files.

[187] Wilcox, Joe, "Windows XP: A Bundle of Trouble?", *CNET News.com,* May 21, 2001.

> Guernsey's LeTocq sees a more obvious reason for Windows Media Player 8 to cast off users: With this version, Microsoft reduced the recording quality of MP3, the most popular digital music format.

formats, WMA for audio and WMF for video will not play on competing players.[188] Microsoft's digital rights management programs are bundled with "Windows XP/.NET."[189] Taken together this is a comprehensive campaign to use the operating system to make it difficult to use competing formats.[190]

Strong-arm tactics that have relied on the market power afforded by the monopoly have re-emerged. Concerns about pressure and intimidation to adopt the new bundle have surfaced.[191]

> "What Microsoft has done is cut the record quality in half, so that people will want to use the Windows Media Audio (WMA) format instead. While the typical minimum for recording MP3s is 128 kbps, Windows Media Player offers one option: 56kbps.
> "They want to force people to WMA and make it the standard for digital music."

[188] The importance of the media player filters into a wide range of applications. Wilcox, Joe, "Want Media Player 8? Buy windows XP," *CNET News.com,* April 24, 2001,

> Integrating the media player with Windows XP better positions the product to compete against RealPlayer and Quicktime. It could also bolster Microsoft's development effort for games, where Direct X and Windows Media Player are emerging as top picks by developers.
> As a result, some analysts believe integrating Windows Media Player with Windows could help the company woo more developers for its forthcoming Xbox gaming console.
> This is clearly a content leverage play... The question is will Xbox drive the standards here? You've got DirectX on the Xbox and the PC. What you have there is a cross-platform environment feeding Xbox and Windows XP supported by Direct X and Windows Media Player...
> At the same time, through its much touted .NET software-as-a-service initiative, Microsoft increasingly is focusing on subscription revenue rather than software sales to sustain growth. Whether the company can succeed at this is uncertain. But as the company looks to deliver more content through the Web, controlling video-streaming standards would be a valuable asset.

[189] EPIC, Complaint.

[190] The forced upgrade cycle plays a key role here. By desupporting competing software and driving consumers to new machines, Microsoft erases the installed-base of its competitors. Buckman, Rebecca, "A Titan's Power – Potent Program: With its Old Playbook, Microsoft is Muscling Into New Web Markets using Aggressive Bundling, It Roils High-Tech World with Windows Overhaul Some Gains for Consumers," *Wall Street Journal,* June 29, 2001

> Music is another battleground. Microsoft announced earlier this year that the latest version of its Windows Media Player, which lets people listen to music and watch videos on the Web, will work only with Windows XP and not with older versions of the operating system. Mitch Kapor, the founder of onetime rival Lotus Development Corp., calls that a "forced March to upgrade."

[191] Klein, Alec, "Microsoft, AOL Clashed Over Media Player," *Washington Post,* June 21, 2001; Buckman, Rebecca, "A Titan's Power – Potent Program: With its Old Playbook, Microsoft is Muscling Into New Web Markets using Aggressive Bundling, It Roils High-Tech World with Windows Overhaul Some Gains for Consumers," *Wall Street Journal,* June 29, 2001.

> Microsoft has written support for Passport and the Widows Media audio-video format into business contracts. Microsoft says support for those services is simply an option, though some companies report they are feeling pressure for Microsoft to adopt the services...
> Match.com and Tutor.com, which provide content to MSN such as online matchmaking and homework help, say Microsoft has asked them to adopt the Passport service. It was a "requirement," says Tutor.com's director of business development.

Similarly, charges of patent infringement have been filed.[192] The pattern of preannouncing a product, to freeze consumers into waiting for Microsoft's offering rather than buy from competitors is evident to some.[193]

The Court of Appeals ruled that deception in defense of monopoly violates the antitrust laws. Microsoft had misled programmers into using its proprietary version of JAVA thinking they were writing programs that would also run on the Sun Microsystems version of JAVA. The intent and effect was to prevent Sun from building up a body of applications that would run anywhere. "Windows XP/.NET" is using a similarly deceptive strategy to mislead consumers into thinking that they must use Microsoft's programs to access the Internet or to conduct secure transactions.[194]

In addition to requiring Microsoft Passport for some applications and to repeatedly prompting consumers to use Passport in other cases, Microsoft messages mislead consumers into

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Markoff, John, "Break in Talks Between AOL and Microsoft," *June 17, 2001,*
"Tremendous progress had been made between AOL and Time Warner and Microsoft, but ultimately the talks broke down over an issue unrelated to AOL and Microsoft per se," said John Buckley, an AOL corporate vive president. "The issue was Microsoft's determination that it be in a position to control digital media on the Internet, and we could not acquiesce to that ambition...." AOL officials said Microsoft had objected to AOL continuing to use RealPlayer, including the issue of the stability of the program running with Microsoft's Windows XP operating system.

[192] Wilcox, Joe, "Windows XP Could See September Ship Date, *CNET News.com*, August 7, 2001.

[193] Wong, Wylie and Robert Lemos, "HailStorm Still Thunders in the Distance," *ZDNet News,* August 30, 2001,
Whether it's a case of purposeful confusion or of real ambiguity about how to proceed with the project, Microsoft's comments offer fodder to critics who have accused the company of preannouncing HailStorm as a marketing poly to freeze its competitor's initiatives...
Critics say Microsoft is falling back on a familiar strategy – spreading fear, uncertainty and doubt (or FUD) – to convince consumers to wait for its products rather than buy from the competition..
Microsoft Chief Executive Steve Ballmer tossed out the idea of HailStorm during a press conference nearly two years ago. And in March, Microsoft formally announced the HailStorm initiative.

Swisher, Kara, "Microsoft Charts New Course, But is it the Right Approach?" *Wall Street Journal,* March 26, 2001,
Hailstorm [.NET] still smacks of the same tone of previous fights over Intuit, MSN and browsers. Then, as now, the company appears to have tried to declare victory long before the battle, scaring everyone with bogeyman tactics and a Windows centric attitude.

[194] EPIC Complaint, 38, 47-51; Lohr, Steve, "Privacy Group Is Taking Issue With Microsoft," *New York Times*, July 25, 2001.

thinking that Microsoft products are necessary to access the Internet. In some cases Microsoft misleads consumers into thinking that their non-Microsoft applications will not run on Windows XP, when they will. Microsoft misleads consumers into thinking that Passport provides greater security, when there is no basis for making this claim. Microsoft misleads consumers by claiming that their accounts are not secure unless they use passport. The effect will be to prevent competitors from building or preserving a base of users. In the case of identity verification (Passport) this will create an immense barrier to entry, as the illegally gained economies of scale will render alternative identity verification systems non-competitive.[195]

4. THE PROBLEM OF AN EXCLUSIVE, PROPRIETARY PASSPORT TO THE INTERNET AS A NEW BASIS OF MONOPOLY POWER

"Windows XP/.NET" endeavors to add another weapon to Microsoft's anticompetitive arsenal. Microsoft is expending great efforts to make its identify verification software and service the dominant, if not sole, verification service.[196] Microsoft proposes to use its verification service to gather and concentrate a great deal of personal information on individuals to be shared with partners.

Identity authentication is a critical function for new "distributed" Internet computing, communications and commerce. As communications and commerce becomes distributed across

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[195] "Microsoft: How It Became Stronger Than Ever," *BusinessWeek*, June 4, 2001,
> Because of the software maker's incredible distribution power, opponents fear that Microsoft will be able to turn it into the ubiquitous payment and identity-authentication system on the Net. Microsoft already boasts 160 million Passport accounts. Although many of those are duplicates, this base of customers will only get bigger, since 160 million new Windows PCs are expected to convince Web-site owners that they out to accept Passport. That, in turn, will trigger more consumers to sign up – the type of powerful cycle that winds up creating monopolies.

[196] Tribble, Bud, *Smart Partner,* April 24, 2001,
> Think about single sign-on and the Web. To play in .NET, who has to have a contract signed with Microsoft? The end user does, the service provider probably does. It puts Microsoft in a very central point of control.

web sites and diverse applications, parties to the interaction (conversation or transaction) need to know whom they are dealing with. Authentication is entirely personal and data based, not dependent on location. That is, the machine or the software that is being used to initiate the interaction is irrelevant, it is the identity of the person, and only the person, that matters.

Control of this function would insert Microsoft in all e-commerce transactions and communications.[197] Not only can it charge vendors for each transaction (replicating PC operating system business model in which its primary customers are computer manufacturers, not the public),[198] but also it can drive its proprietary applications and languages farther into the network (by requiring vendors to adopt compatible applications). By leveraging software to gain control of transactional data, however, Microsoft is seeking to create a new basis of market power.[199]

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[197] Gardner, Dana, *Network World*, April 16, 2001,

> Microsoft is injecting its own service between corporate Web sites and their customers. The question is, if I run a Web site, do I want Microsoft to be between me and my customers?

[198] Le Tocq, Chris, *Forbes.com*, April 10, 2001,

> Microsoft wants to be the driver's license issue of the Web. They want everyone to pay them $10 per month to drive. And with this [.NET] architecture, they are rewriting the Internet in the way they feel it should have been written in the first place

Microsoft: How It Became Stronger Than Ever," *BusinessWeek*, June 4, 2001,

> That puts Microsoft in the position, if it wants, to charge online merchants a fee for its Passport service. Although the company now denies that's the plan, its executives in the past talked about collecting fees for every e-commerce transaction.

The goal of collecting on every transaction had been articulated early on in Microsoft's thinking about the Web. *Wall street Journal,* June 5, 1997. "Nathan Myrhvold, Microsoft's chief technology officer, confirms Microsoft's hopes to get a 'vig,' or vigorish, on every transaction over the Internet that uses Microsoft's technology, though he says in some cases Microsoft's share could come from a one-time licensing fee."

[199] *"Wired*, March 21, 2001,

> By definition, if they are saying the operating system will become an online service, they are leveraging their OS monopoly into brand new areas. They will take control of the consumer, from the moment he turns on his brand new computer shipped to him by an OEM, and will be hand-in-hand with that consumer through every action he or she takes on the Internet forever.

Microsoft is certainly intent on gaining a dominant position in identity authentication.[200] It bundles Passport into "Windows XP/.NET." It requires Passport for several of its own Internet services. It will prompt purchasers of the new operating system to get a Microsoft Passport, with messages that are thoroughly misleading about the need for Passport.

IX. SOFTWARE INDUSTRY COMPETITION IS IN THE PUBLIC INTEREST

Reviewing these examples of actual and nascent competition that Microsoft has snuffed out with its anticompetitive practices leads us to concluded that this case is not about new high tech industries in which consumers may have to live with a monopoly. Rather, it is about old dirty business practices that drive up prices, deny consumers choice, and slow innovation by allowing the monopolist to control the pace of product development.[201]

1. THE NATURE OF COMPETITION

Competition in high technology industries can take place both within the layers of the platform and across the layers of the platform. Competition across layers builds out from a customer base in a complementary product. That is, a firm that is dominant in one layer (OS) can compete at another layer (CPU), but does not lose control over the layer it dominates. It is

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[200] Buckman, Rebecca, and Julia Angwin, "Microsoft, AOL Battle on Windows XP, Talks on Online Deal Falter As Software Maker Plans Instant-Message Feature," *Wall Street Journal,* June 4, 2001,

> America Online and other Microsoft competitors have also complained about Windows XP's connection to Passport, an online-identity service that Microsoft wants to use s a gateway to a raft of other, planned Internet services. New users of Windows XP will be prompted to sign up for a Passport account; if they don't they will be asked two more times, Microsoft Product Manager Greg Sullivan said. Users must have a Passport to use Windows Messenger, the new instant-messaging service that will be bolted to Widows XP.

[201] *The Consumer Case Against Microsoft*, pp. 53 – 59.

forced to squeeze out the rents from the other layer, but tries to defend it monopoly rents in its own layer. This is, of course, what Netscape/Java threatened to do to Microsoft. By attacking from the applications layer to the operating system layer, they threatened to "commoditize" the operating system. Commoditization is the consumers' best friend, since it drives the rents out of the industry. The possibility of competition across both layers exists. Full component competition could break out.

Experience in the software and other high tech industries suggests that real competition would produce many integrated, consumer-friendly operating systems that perform more reliably and better meet consumer needs. In a world of competing systems, compatibility would become a highly valued commodity and open standards would be developed. Competitive industries center on standards to which all companies can develop products. Non-dominant firms strive for enhanced compatibility. The Court makes this very point in dismissing Microsoft's claim that it needed to require the installation of its browser to prevent fragmentation of the Windows platform.

In other words, a large market share is not synonymous with a large market.[202] A standard is not synonymous with a proprietary standard.[203] Open platforms and compatible products are identified as providing a basis for network effects that is at least as dynamic as closed, proprietary platforms[204] and much less prone to anti-competitive conduct.[205]

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[202] Sheremata, *Barriers to Innovation*, *supra* note 69, at 965.
[203] Hal Varian & Karl Shapiro, Information Rules (1999).
[204] Bresnahan & Greenstein, at 36-37; Joseph Farrell & Michael L. Katz, *The Effect of Antitrust and Intellectual Property Law on Compatibility and Innovation*, 43 ANTITRUST BULL., 645, 650 (1998); Katz & Shapiro, *System Competition*, *supra* note, at 109-12; Carmen Matutes & Pierre Regibeau, *Mix and Match: Product Compatibility Without Network Externalities*, 19 RAND J. ECON. 221-233 (1988).
[205] Mark A. Lemley & David McGowan, *Could Java Change Everything? The Competitive Propriety of a Proprietary Standard*, 43 ANTITRUST BULL. 715 (1998) [hereinafter Lemley & McGowan; *Could Java*]; Mark A.

The installed base of computers is so large that it could support multiple and competing operating systems, software packages, and browsers that would be optimized to meet specific needs. Nor is there any reason to believe that the installed base will be fragmented in the sense that cross-platform applications and translations would not be available to those who value them. Microsoft's number one enemy was always compatibility that it could not control. No one ever threatened to fragment the base. What would be competitors threatened to do was to migrate it to a platform that was broader and more inclusive than Microsoft's. The only threat was to Microsoft's monopoly control over the installed base.[206]

The market outcome that most vigorously challenges the proprietary "winner-take-most" model is a model that centers on open standards.[207] Microsoft itself recognizes that the most important developments in computing in post mainframe environment are open standards—first the PC and then the Internet.

Lemley & David McGowan, *Legal Implications of Network Effects*, 86 CAL. L. REV. 479, 516-18 (1998) [hereinafter Lemley & McGowan, *Legal Implications*].

[206] *Internet Tidal Wave*, *supra* note 9 (identifies cross and multi-platform applications as its fundamental challenge).

> Apple benefited by having TCP support before we did and is working hard to build a browser. . . from OpenDoc components. Apple will push for OpenDoc protocols to be used on the Internet, and is already offering good server configurations. . . .
> Acrobat and quick time are popular on the network because they are cross platform and the readers are free. . . .
> Netscape. Their browser. . . . They are pursuing a multi-platform strategy. . .
> Over time the shell and the browser will converge and support hierachical/listquery viewing as well as document with links viewing. The former is the structured approach and the later allows for richer presentation. We need to establish OLE protocols as the way rich documents are shared on the Internet. I am sure the OpenDoc consortium will try and block this.

[207] Lemley & McGowan, *Could Java*, *supra* note 205; Lemley & McGowan, *Legal Implications*, *supra* note 205, at 515-23.

2. THE COMPUTER PLATFORM PROVIDES ABUNDANT EXAMPLES OF NATURAL COMPETITION

Proof that competition is sustainable in high tech industries is provided in the trial record by Microsoft in its own words. We need look no farther than to another layer of the platform, the hardware layer. Microsoft's strategic analysis gives us a graphic picture of the computer as a commodity, with constant price competition, pressures on margins, rising quality and compatibility. Here is a high-tech commodity – a platform itself – that has sustained vigorous competition for two decades and produced an unparalleled record of innovation and declining price. The key is an open standard at the heart of the PC around which component producers compete.

Gates' analysis of the Internet points in a similar direction.[208]

The remedy must attack the key element of market power that Microsoft executives repeatedly identified and used in their business plans and strategies to undermine competition. The operating system monopoly could no longer provide a basis for the abuse of market power.

Perhaps the most important lesson that can be learned from the Court's careful consideration of the multiple forms of harm is that consumers need not fear real competition in the software industry or the new economy. Given the fact that Microsoft has undermined successful products from profitable companies, there is every reason to believe that consumers

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[208] Id.

> The Internet is the most important single development to come along since the IBM PC was introduced in 1981. . . .
> The Internet's unique position arises from a number of elements. The TCP/IP protocols that define its transport level support distributed computing and scale incredibly well. The Internet Engineering Task Force (IETF) has defined an evolutionary path that will avoid it running into future problems even as virtually everyone on the planet connects up. The HTTP protocols that define HTML Web browsers are extremely simple and have allowed servers to handle incredible traffic reasonably well

would receive products that are better at lower prices if the anti-competitive practices were eliminated. The ability of developers to create products that are compatible, which Microsoft then drives out of the market with anti-competitive tactics, suggests that if Microsoft were prevented from abusing its market power, a competitive market would produce compatible products.

Fears that competition will cause computing to become more difficult, requiring support of multiple, incompatible applications and operating systems, are unfounded. If the installed base of more than 300 million computers were divided between competitors, interoperability would be seen as a premium quality. OEMs could purchase and choose from a number of bundles and companies could profitably write programs to any of them. Portability will be highly valued in the market.

In fact, Microsoft has fought against software compatibility in market after market. Over time, as Microsoft's market share has grown, it has built more and more barriers to interoperability between Windows and other operating systems or application software. Microsoft is not actually concerned about incompatibility when it controls that incompatibility and it suits its business interests. The threat to the public has grown with each subsequent conquest of a market.

The trial record undermines the claim that the monopoly persists because of the unique natural forces of the software market. The causes of its durability are to be found in the plain old anti-competitive business practices of Microsoft. Real competition, even in this new economy industry, is not likely to impose the costs that its critics claim. Instead, it is likely to deliver the benefits consumers have come to expect from truly competitive markets. Thus, the lesson for consumers and antitrust policy makers to be drawn from the successful prosecution of the

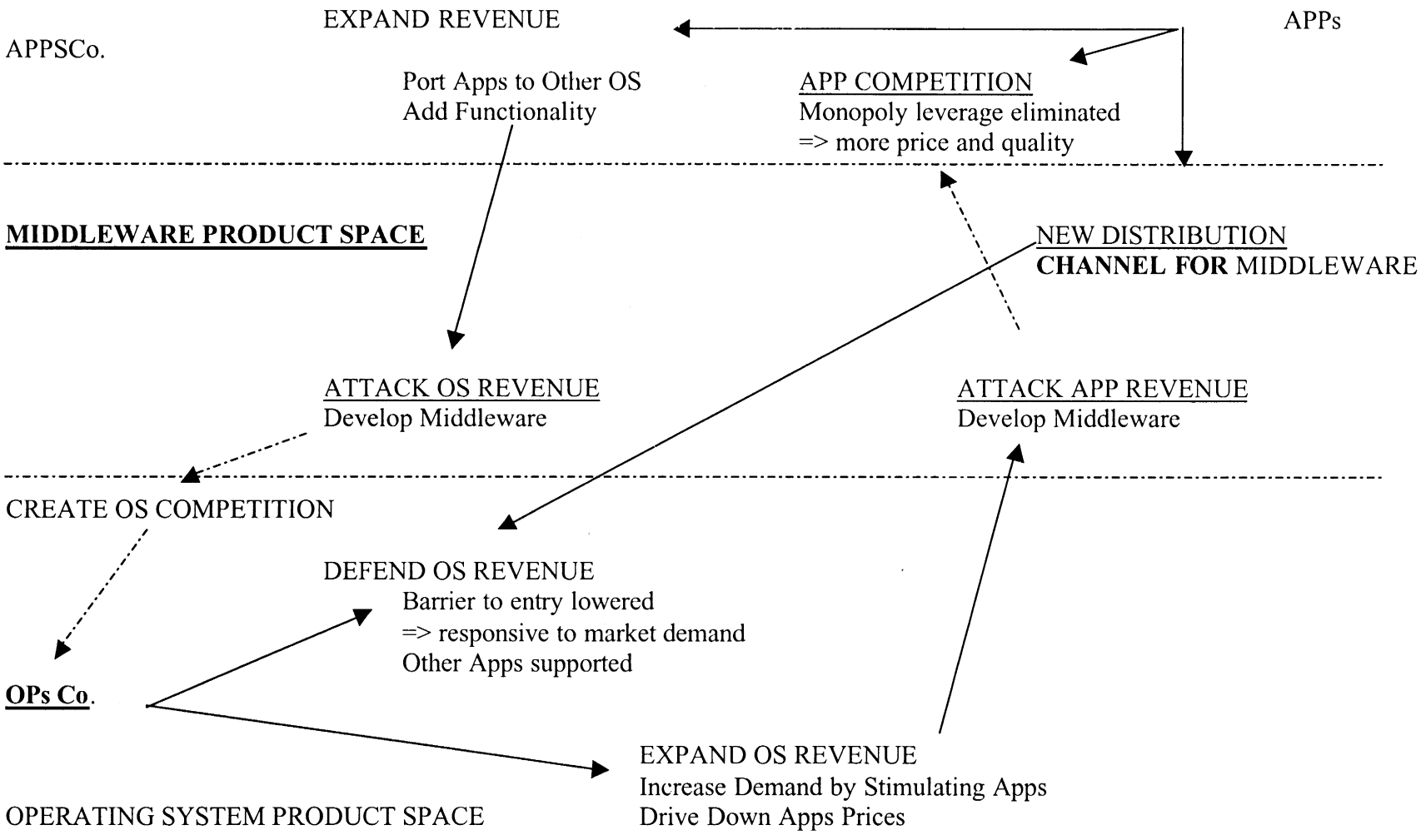
Microsoft case is clear—antitrust properly focused on competition should be a powerful form of consumer protection in the new economy, as it was in the old.

3. THE REMANDED REMEDY

When the Court of Appeals remanded the case to the Court to structure a remedy, it did not overturn the logic or goals of the remedy, it directed the Court to enquire as to whether a break-up was necessary to fulfill the requirement of the law. Conduct remedies must now accomplish that goal.

A "functional" divestiture would have divided Microsoft into two roughly equal companies, each owning different types of software. The Operating Company would be built around the Windows operating system. The Applications Company would be built around Office, the Internet Explorer browser, and other applications. A functional break-up attacks the key element of market power that Microsoft executives repeatedly identified and used in their business plans and strategies to undermine competition (see Exhibit IX-1). A functional divestiture would restore the natural competitive process in the software industry. Competition builds out from a strong customer base in a complementary product. That is the competitive dynamic that existed in the mid-1990s before Microsoft's anticompetitive assault shut it down.

EXHIBIT IX-1: THE LOGIC OF FUNCTIONAL DIVESTITURE: APPLICATIONS PRODUCT SPACE



The break-up approach gave considerable weight to the layer concept. It would restore the competitive dynamics of the software market.[209] It would allow and encourage competition across the two software layers. Therefore, it would allow competition to grow in the way it was developing before Microsoft's vigorous campaign to preserve its monopoly in the mid-1990s. The operating system monopoly could no longer provide a basis for the abuse of market power. The applications market would become much more competitive. At the same time, by not breaking up the operating system company into competing units, the potential problem of "fragmenting" the operating system (i.e., creating incompatible versions) would be avoided. The Applications Company could not rely on the operating system monopoly to maximize its profits. It would have to find new revenues, like developing applications for non-Microsoft operating systems (e.g., Linux), or encroaching on the operating systems market by extending the functionality of its products to become "middleware" (i.e., replicating the browser threat). It would have to be more responsive to consumer demands—improving quality and decreasing price.

With more applications available, and interoperability expanding, non-Microsoft operating systems would become more viable competitors to Windows. This would lead to more competitive pressure on the Operating Company. It could not retaliate by threatening to withhold its product or raising its prices, as it has done in the past, lest competing operating systems become more attractive to computer manufacturers and software developers, who would have a real choice in PC operating systems for the first time in years.

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[209] Plaintiffs' Memorandum in Support of Proposed Final Judgment, Declaration of Paul Romer, Declaration of Carl Shapiro, Declaration of Rebecca Henderson, United States v. Microsoft Corp., 87 F. Supp. 2d 30, 44 (D.D.C. 2000) (Nos. CIV. A. 98-1232, 98-1233).

The District Court must now find a conduct remedy that accomplishes the same outcome. Unfortunately, as the next section shows, the PFJ fails completely to create the conditions for competition to be restored in the industry.

X. THE INADEQUACY OF THE PFJ

1. ANTICOMPETITIVE PRACTICES MUST BE ROOTED OUT AT ALL STAGES OF THE SOFTWARE VALUE CHAIN – CREATION, DISTRIBUTION AND USE

To describe what must be done in practical terms, I like to use the business school concept of the value chain. To unfetter the market from anticompetitive conduct, terminate the illegal monopoly and ensure that there remain no practices likely to result in monopolization in the future, the remedy must address the creation, distribution and use of software. In order for new software to have a fair chance to compete the remedy must

- Establish clear enforceable rules that are backed up with substantial penalties for failure to comply to
- create an environment in which independent software vendors and alternative platform developers are free to develop products that compete with Windows and with other Microsoft products,
- free computer manufacturers to install these products without fear of retaliation, and
- enable consumers to choose among them with equal ease as with Microsoft products.

The Microsoft-Department of Justice settlement is an abysmal failure at all three levels. Under the proposed Microsoft-Department of Justice settlement, Microsoft will be undeterred from continuing its anticompetitive business practices.

2. LAW ENFORCEMENT

When law enforcement agencies win a strong antitrust verdict, the law requires them to seek a remedy that corrects the problem and protects the public from future illegal activity.

i) Weak Enforcement Mechanisms

The proposed settlement lacks meaningful enforcement mechanisms. Under the PFJ, enforcement comes in the form of oversight by a technical committee reporting to the plaintiffs and then, perhaps, to the Court. Disputes will take so long to resolve that few will bother with the process. Equally problematic, the settlement contemplates no serious punishment for misbehaving. The result is clear. The lack of enforcement provides no effective real time relief for computer manufacturers or independent software developers harmed by Microsoft. The lack of discipline for failure to comply gives Microsoft little incentive to change its practices.

The proposed settlement imposes no penalty on Microsoft if it fails to comply with the order, except to extend oversight for another two years, at which time it will automatically be freed from the oversight. At best, this creates only a minor deterrent for Microsoft. It is important to recall that the Microsoft activities that the Court of Appeals unanimously ruled to be illegal took place while Microsoft was under a consent decree. The company simply ignored that consent decree (boasting as much in internal documents that came to light during the prosecution of the company). Slapping Microsoft on the wrist once again will do little but deepen its resolve to illegally monopolize computing.

Non-Microsoft developers need an active complaint review process to protect them from Microsoft discrimination and retaliation. The enforcement process would best be served being administered by the Court, through a special master. The special master can consult with the

technical committee, but ultimately the standard of conduct is a violation of law subject to the Court's jurisdiction. The state attorneys general should have standing to review and inspect the implementation of the settlement and bring complaints to the special master.

Any remedy must include enforcement based on bright line rules with clear outcomes if those rules are violated, so that the transaction cost of enforcement is lower. Microsoft must face severe and clearly outlined penalties should it fail to comply with the consent decree. Such penalties should include substantial monetary damages paid to those harmed by future bad behavior. They also should include, ultimately, the threat of corporate breakup for repeated violations.

ii) Ambiguous Terms and Conditions

The problem of a lack of enforcement is magnified dramatically because of ambiguous terms and loopholes in the PFJ.

The wording and definitions contained in the proposed settlement are too restrictive. They do not encourage competition. Key definitions in the proposed settlement are too ambiguous or narrow (e.g., operating system, middleware, interoperate, communications protocol). At the same time, critical software (e.g., server APIs, privacy, digital rights, authentication), hardware products (i.e. Palm) and key potential competitors (e.g. cross platform developers) are excluded. The remedy must define all critical terms precisely. It should err on the side of inclusion.

Under the loophole-ridden terms and the savings clauses of the proposed settlement, Microsoft is allowed to determine who can compete and in which product space. Such phrasings allow Microsoft to shore up its monopoly. Per the proposal, Microsoft controls what relief is provided by defining the products subject to disclosure, and by pre-certifying who has access to

necessary technical information. Meanwhile, the company, claiming to protect security or intellectual property rights, is permitted to withhold information needed by software developers to build applications that run on, or compete with, the Windows platform. Microsoft can enter into agreements that are discriminatory if the company deems them "reasonably necessary." Such loopholes negate the requirements to share information. The policy of "ship first, ask questions later" preserves Microsoft's monopoly advantage and undermines competition, particularly in light of the proposal's weak enforcement mechanisms.

Microsoft should have no role in determining who has access to the remedy, or which products are covered. The proposed settlement entails an unacceptable delay in implementing what is itself an unacceptably short consent decree.

The settlement fails to require that Microsoft comply with the law immediately. Instead, Microsoft is allowed to comply according to its business schedule (i.e., it may decide when to ship its first patch) or up to one year after the settlement takes effect. In the meantime, it can (1) sell products that violate the law by embedding a new generation of anticompetitive practices in the PC marketplace, and (2) use the loopholes in the settlement to reconfigure its software so that the anticompetitive practices are beyond the reach of the settlement.

Furthermore, the PFJ expires after only five years, an extremely short period of time in such a proceeding. Worse, some of its provisions would only be in place for four years, considering Microsoft's ability to delay implementation. Microsoft should be required to implement all measures at the soonest possible time. Because of the company's demonstrated ability to manipulate its code (it has shown the ability, for example, to alter core features in a matter of a few weeks), such should take far less than a year. And, because of Microsoft's repeated abuse of market power, the consent decree should continue for at least ten years.

3. INDEPENDENT SOFTWARE DEVELOPERS

Inadequate disclosure of Application Programming Interfaces (APIs) and unclear definitions left in the hands of Microsoft are an invitation to quibbling and evasion that will undermine the opportunity to develop competing products. The proposed settlement requires disclosure of an inadequate, incomplete set of APIs and leaves non-Microsoft software developers in the position of having to guess at what is needed, or what Microsoft is using. Microsoft, consistent with what it did under the last consent decree, will argue that functionalities are not middleware and/or move them into the operating system to avoid providing access. Furthermore, Microsoft is given a full year to comply, more than adequate time for the company to reconfigure the bundle to vitiate its effect.

Microsoft must be required to identify to the Court and deposit in the "secure facility" each and every API necessary to call each and every middleware program or application that it has bundled with the operating system. Clearly Microsoft knows how its own program works. Non-Microsoft developers need access to this information. A finding that Microsoft has withheld (or changed without notice) any critical information should trigger a severe penalty.

The proposed settlement fails to repair the damage done to Netscape's browser and to Sun Microsystems' Java. The competitive threat that had been attacked with illegally anticompetitive practices was the combination of Netscape Navigator and Sun's "write once, run anywhere" Java. The proposed settlement does little to open the monopoly in the browser market and nothing to restore Java as a competitive threat. Microsoft should be required to open the source code for the entire browser and ship and support Sun's Java with all future operating systems.

The proposed settlement stifles innovation because its terms appear to apply only to products that Microsoft has already offered. New products receive no protection from the proposed settlement. Microsoft can use all prohibited practices to prevent *new* products from gaining access to the boot screen. This major shortcoming legalizes the Microsoft standard practice of attacking any product that it has not developed, which it thinks might be a threat at some point to its monopoly. The remedy should not allow restrictions on products that Microsoft has not offered or developed.

The remedy appears to punish the victims instead of Microsoft by requiring anyone who wants to develop for the Windows platform to license their software to Microsoft. Independent developers are required to license their products to Microsoft in exchange for being allowed to write programs on the monopoly platform. It is difficult to imagine a requirement that does more to stifle innovation. Microsoft has been repeatedly charged with and settled cases alleging theft of competitors' ideas, violation of patents, abrogation of contracts, and more. The required disclosure of Microsoft code is a remedy to a finding of illegal conduct.

4. COMPUTER MANUFACTURERS

The proposed settlement purports to, but fails to, eliminate Microsoft's ability to price discriminate. As a consequence, Microsoft will retain enormous pricing leverage. Microsoft retains the ability to offer bonuses, joint development agreements and pricing discounts that favor its products and make competing products unattractive. The full Windows XP bundle could be priced considerably below a stripped-down operating-system-only product.

The proposed settlement does not prohibit Microsoft retaliation against computer manufacturers. By banning only certain forms of retaliation, the proposed settlement invites

(almost legalizes) other forms of retaliation. The only form of retaliation banned is the withholding or manipulation of access to the operating system or middleware, and then only in the form of monetary punishment. Microsoft is free to retaliate against computer manufacturers via non-monetary means and by leveraging its Office monopoly, or any of its other non-middleware products. Only the inclusion of middleware is protected against retaliation. That is, Microsoft can retaliate by withholding or manipulating access to all of its products against computer manufacturers for including non-middleware products. The remedy must ban *all* forms of retaliation. The prohibition on discrimination should extend to all products where Microsoft has market power. It should cover all practices, including pricing, training, access to code, support, etc.

5. CONSUMERS

The boot screen must be competitively neutral. When an original equipment manufacturer (OEM) chooses to preinstall a non-Microsoft product, there should be no limitation on the presentation of those products, and no obligation to install competing Microsoft products.

The proposed settlement fails to create a level playing field for consumer choice of non-Microsoft software at the boot screen and desktop. Under the proposed settlement, Microsoft continues to enjoy the "default" position on the desktop. Competitors are forced into the "add/remove" position, yet Microsoft middleware itself can never actually be removed. Microsoft controls promotion through a provision that requires that icons for competing products cannot be larger than Microsoft product icons.

Microsoft is granted unique rights to undercut consumer choice. Consumers who wish to choose non-Microsoft products are prompted to confirm their decision at least twice and perhaps

three times, whereas Microsoft products are the "default" option (even if they never actually are chosen). After a consumer has chosen a non-Microsoft product, under the proposed settlement, Microsoft can require a consumer to confirm the choice. Similarly, fourteen days after a computer manufacturer installs a non-Microsoft product, Microsoft can use its desktop sweeper to force the consumer to choose that product a second time. The consumer choice environment must be competitively neutral. There should be no special opportunity for Microsoft to "win back" customers. There should be no bias in how lists of frequently used programs are compiled.

The provisions of the settlement do not appear to apply to computers sold to businesses and governments. By focusing many of the provisions banning anti-competitive and anti-consumer practices on computer manufacturers, the settlement appears to exclude business and government from the protections. In other words, Microsoft does not have to allow boot screen flexibility, and add/remove options in large market segments where its monopoly is just as strong. Microsoft should be required to provide a level playing field on the desktop to all consumers, regardless of the channel through which the computer is purchased.

XI. DETAILED CRITIQUE OF THE PROPOSED FINAL JUDGMENT

1. ISV HELL

The previous section gives a broad overview of why the PFJ is inadequate to address the anticompetitive conduct of Microsoft and restore competition. This section looks in detail at the flaws in the settlement related to Independent Software Vendors or ISVs. The PFJ fails

completely to create a level playing field for ISVs. As described below, every section of the remedy contains a fundamental flaw. The figure on the following page illustrates the problems.

The antitrust case centered on the effort of Microsoft to prevent ISVs from developing competing software. One of the tools Microsoft used was to exert leverage over the computer manufacturers, who choose which software to preinstall in the PC. Thus, although computer manufacturers play an important role in the case, the independent software vendors are Microsoft's actual and potential competitors. The PFJ focuses too much on computer manufacturers and not enough on ISVs.

The result of the proposed settlement will likely be to make matters worse in the industry, not better. The settlement defines such a narrow range of activities as illegal that most ISVs will simply not subject themselves to the "hell" of the PFJ. Instead, they will likely abandon the product space.

2. DETAILS OF STACKING THE DECK AGAINST ISVs

This section walks through "Section III Prohibited Conduct" of the PFJ and identifies areas where Microsoft is given control over the remedy, or where ambiguities give the company the ability to frustrate competition just as it has in the past. Enforcement will matter little, since when all is said and done, there is almost nothing to enforce. The fact that the enforcement mechanism is itself unwieldy and ineffective only makes matters worse.

SOFTWARE COMPETITION WILL NOT BE RESTORED BECAUSE THE SETTLEMENT DOES NOT CREATE A LEVEL PLAYING FIELD FOR INDEPENDENT SOFTWARE VENDORS

DO I HAVE A FAIR CHANCE TO HAVE CONSUMERS USE MY PRODUCT?
Consumers have to choose my software twice to get my icon on the screen.
Consumers never have to choose Microsoft's; it's still the default.
Microsoft can sweep my icon off the system every 14 days.

WILL OEMs PUT MY PRODUCT ON THE PC?
Microsoft's code is guaranteed to be in every PC, only its icons are removed.
My code gets into only those PCs that I convince OEMs to install.
Microsoft can still give OEMs "considerations" to promote its product.
Microsoft can engage in Joint Ventures and prevent OEMs from using mine.
Microsoft can leverage its monopoly applications to keep my products out.

WHAT APIs DO I GET TO SEE?
Only APIs for products Microsoft has already developed.
Only APIs that Microsoft has decided not to move into the operating system.
Only APIs that Microsoft decides do not compromise its piracy, virus, licensing, digital rights management, encryption or authentication systems.

WHEN DO I GET TO SEE THE APIs?
Very late in the process, after Microsoft has had a huge head start in developing its products.
Only after Microsoft ships a fix, up until a year from now.

WHAT DO I HAVE TO DO TO SEE THE APIs?
License my software to Microsoft.
Convince Microsoft my planned product is reasonable.
Let Microsoft decide if I have a viable business.
Let Microsoft review and certify my product before I ship it.

Terms of the PFJ are indicated below in normal text. Comments and concerns are **emboldened**

A. Microsoft shall not retaliate against an OEM... because it is known to Microsoft that the OEM is or is contemplating:

1. developing, distributing, promoting, using, selling, or licensing any software that competes with Microsoft Platform Software or any product or service that distributes or promotes any Non-Microsoft Middleware.

Retaliation for development or use of applications is allowed.

[DEFINITION]

L. Microsoft Platform Software" means (i) a Windows Operating System Product and/or (ii) a Microsoft Middleware Product.

U. "Windows Operating System Product" means the software code (as opposed to source code) distributed commercially by Microsoft for use with Personal Computers... The software code that comprises a Windows Operating System Product shall be determined by Microsoft in its sole discretion.

Microsoft has sole discretion to define "operating system," which dictates and governs all subsequent aspects of the remedy.

[DEFINITION]

J. "Microsoft Middleware" means software code that

1. Microsoft distributes separately from a Windows Operating System Product to update that Windows Operating System Product;

2. is Trademarked;

K. "Microsoft Middleware Product" means

1. the functionality provided by Internet Explorer, Microsoft's Java Virtual Machine, Windows Media Player, Windows Messenger, Outlook Express and their successors in a Windows Operating System Product, and

2. for any functionality that is first licensed, distributed or sold by Microsoft after the entry of this Final Judgment and that is part of any Windows Operating System Product

a. Internet browsers, email client software, networked audio/video client software, instant messaging software or

b. functionality provided by Microsoft software that

i. is, or in the year preceding the commercial release of any new Windows Operating System Product was, distributed separately by Microsoft (or by an entity acquired by Microsoft) from a Windows Operating System Product;

ii. is similar to the functionality provided by a Non-Microsoft Middleware Product; and

iii. is Trademarked.

The requirements that products be sold separately and be trademarked gives Microsoft flexibility to avoid disclosure of APIs.

T. "Trademarked" means distributed in commerce and identified as distributed by a name other than Microsoft ® or Windows ® that Microsoft has claimed as a trademark or service mark by (i) marking the name with trademark notices, such as ® or ™, in connection with a product distributed in the United States; (ii) filing an application for trademark protection for the name in the United States Patent and Trademark Office; or (iii) asserting the name as a trademark in the United States in a demand letter or lawsuit. Any product distributed under descriptive or generic terms or a name comprised of the Microsoft ® or Windows ® trademarks together with descriptive or generic terms shall not be Trademarked as that term is used in this Final Judgment. Microsoft hereby disclaims any trademark rights in such descriptive or generic terms apart from the Microsoft ® or Windows ® trademarks, and hereby abandons any such rights that it may acquire in the future.

Microsoft has the ability to move products out of the middleware category and avoid disclosure of APIs by shifting the trademark around. It appears that Windows Messenger® would be trademarked, but Windows® Messenger might not be.?

III. A. 3 Nothing in this provision shall prohibit Microsoft from providing Consideration to any OEM with respect to any Microsoft product or service where that Consideration is commensurate with the absolute level or amount of that OEM's development, distribution, promotion, or licensing of that Microsoft product or service.

Microsoft's use of "considerations" has been a key part of its anticompetitive strategy.

This is an invitation to discrimination and haggling.

> III. B. 3. The schedule may include market development allowances, programs, or other discounts in connection with Windows Operating System Products.

This provision allows Microsoft to charge less for larger bundles of products, which

dissuades OEMs from taking smaller bundles and installing Non-Microsoft alternatives.

> III. C. Microsoft shall not restrict by agreement any OEM licensee from exercising any of the following options or alternatives:
>
> 1. Installing, and displaying icons, shortcuts, or menu entries for, any Non-Microsoft Middleware or any product or service (including but not limited to IAP products or services) that distributes, uses, promotes, or supports any Non-Microsoft Middleware.

Restriction for applications is not prohibited.

> 3. Launching automatically, at the conclusion of the initial boot sequence or subsequent boot sequences, or upon connections to or disconnections from the Internet, any Non-Microsoft Middleware if a Microsoft Middleware Product that provides similar functionality would otherwise be launched automatically at that time,

This provision limits the prohibition to products Microsoft has already developed, thereby

allowing Microsoft to restrict OEMs from deploying new products.

> provided that any such Non-Microsoft Middleware displays on the desktop no user interface or a user interface of similar size and shape to the user interface displayed by the corresponding Microsoft Middleware Product.

Microsoft products can never be at a disadvantage.

> III. D. Starting at the earlier of the release of Service Pack 1 for Windows XP or 12 months after the submission of this Final Judgment to the Court, Microsoft shall disclose to ISVs, IHVs, IAPs, ICPs, and OEMs, for the sole purpose of interoperating with a Windows Operating System Product, via the Microsoft Developer Network ("MSDN") or similar mechanisms,

The settlement gives Microsoft a year to accomplish tasks it could perform in weeks. This year consumes one-fifth of the proposed settlement, rendering its effective life a remarkably short four-year period.

> the APIs and related Documentation that are used by Microsoft Middleware to interoperate with a Windows Operating System Product.

Only existing Microsoft products are covered. New products are discouraged.

> [DEFINITION]
>
> A. "Application Programming Interfaces (APIs)" means the interfaces, including any associated callback interfaces, that Microsoft Middleware running on a Windows Operating System Product uses to call upon that Windows Operating System Product in order to obtain any services from that Windows Operating System Product.

Microsoft can avoid disclosure by moving middleware into the operating system, which it defines at its own discretion (see Definition U).

> In the case of a new major version of Microsoft Middleware, the disclosures required by this Section III.D shall occur no later than the last major beta test release of that Microsoft Middleware.

Microsoft has an immense head start.

> In the case of a new version of a Windows Operating System Product, the obligations imposed by this Section III.D shall occur in a Timely Manner.
>
> [DEFINITION]
>
> R. "Timely Manner" means at the time Microsoft first releases a beta test version of a Windows Operating System Product that is distributed to 150,000 or more beta testers.

This is an outrageously high number that means ISVs will have little, if any time.

> E. Starting nine months after the submission of this proposed Final Judgment to the Court, Microsoft shall make available for use by third parties, for the sole purpose of interoperating with a Windows Operating System Product, on reasonable and non-discriminatory terms (consistent with Section III.I), any Communications Protocol that is, on or after the date this Final Judgment is submitted to the Court, (i) implemented in a Windows Operating System Product

installed on a client computer, and (ii) used to interoperate natively (*i.e.*, without the addition of software code to the client operating system product) with a Microsoft server operating system product.

Microsoft server operating system product is not defined.

F.

2. Microsoft shall not enter into any agreement relating to a Windows Operating System Product that conditions the grant of any Consideration on an ISV's refraining from developing, using, distributing, or promoting any software that competes with Microsoft Platform Software or any software that runs on any software that competes with Microsoft Platform Software, except that Microsoft may enter into agreements that place limitations on an ISV's development, use, distribution or promotion of any such software if those limitations are reasonably necessary to and of reasonable scope and duration in relation to a bona fide contractual obligation of the ISV to use, distribute or promote any Microsoft software or to develop software for, or in conjunction with, Microsoft.

Microsoft defines what conditions are reasonable limitations to ISV activities, which provides it leverage over potential competitors.

3. Nothing in this section shall prohibit Microsoft from enforcing any provision of any agreement with any ISV or IHV, or any intellectual property right, that is not inconsistent with this Final Judgment.

G. Microsoft shall not enter into any agreement with:

1. any IAP, ICP, ISV, IHV or OEM that grants Consideration on the condition that such entity distributes, promotes, uses, or supports, exclusively or in a fixed percentage, any Microsoft Platform Software, except that Microsoft may enter into agreements in which such an entity agrees to distribute, promote, use or support Microsoft Platform Software in a fixed percentage whenever Microsoft in good faith obtains a representation that it is commercially practicable for the entity to provide equal or greater distribution, promotion, use or support for software that competes with Microsoft Platform Software, or

Microsoft is in a position demand distribution at a level it determines to be commercially practicable.

2. any IAP or ICP that grants placement on the desktop or elsewhere in any Windows Operating System Product to that IAP or ICP on the condition that the

IAP or ICP refrain from distributing, promoting or using any software that competes with Microsoft Middleware.

Nothing in this section shall prohibit Microsoft from entering into (a) any bona fide joint venture or (b) any joint development or joint services arrangement with any ISV, IHV, IAP, ICP, or OEM for a new product, technology or service, or any material value-add to an existing product, technology or service, in which both Microsoft and the ISV, IHV, IAP, ICP, or OEM contribute significant developer or other resources, that prohibits such entity from competing with the object of the joint venture or other arrangement for a reasonable period of time.

This provision invites Microsoft to leverage joint development agreements to its advantage by manipulating the meaning of "significant resources."

H. Starting at the earlier of the release of Service Pack 1 for Windows XP or 12 months after the submission of this Final Judgment to the Court, Microsoft shall:

1. Allow end users (via a mechanism readily accessible from the desktop or Start menu such as an Add/Remove icon) and OEMs (via standard preinstallation kits) to enable or remove access to each Microsoft Middleware Product or Non-Microsoft Middleware Product by (a) displaying or removing icons, shortcuts, or menu entries on the desktop or Start menu, or anywhere else in a Windows Operating System Product where a list of icons, shortcuts, or menu entries for applications are generally displayed, except that Microsoft may restrict the display of icons, shortcuts, or menu entries for any product in any list of such icons, shortcuts, or menu entries specified in the Windows documentation as being limited to products that provide particular types of functionality, provided that the restrictions are non-discriminatory with respect to non-Microsoft and Microsoft products; and

Particular types of functionality are not defined, nor is the term "non-discriminatory."

Allow end users (via a mechanism readily available from the desktop or Start menu), OEMs (via standard OEM preinstallation kits), and Non-Microsoft Middleware Products (via a mechanism which may, at Microsoft? s option, require confirmation from the end user) to designate a Non-Microsoft Middleware Product to be invoked in place of that Microsoft Middleware Product (or vice versa).

The consumer must choose the Non-Microsoft product twice to make it the preferred option. The consumer may never be required to choose the Microsoft product as it is the default option.

> 3. Ensure that a Windows Operating System Product does not (a) automatically alter an OEM's configuration of icons, shortcuts or menu entries installed or displayed by the OEM pursuant to Section III.C of this Final Judgment without first seeking confirmation from the user and (b) seek such confirmation from the end user for an automatic (as opposed to user-initiated) alteration of the OEM's configuration until 14 days after the initial boot up of a new Personal Computer.

Microsoft gets to sweep non-Microsoft products off the desktop every 14 days.

> I. Microsoft shall offer to license to ISVs, IHVs, IAPs, ICPs, and OEMs any intellectual property rights owned or licensable by Microsoft that are required to exercise any of the options or alternatives expressly provided to them under this Final Judgment, provided that
>
> 5. an ISV, IHV, IAP, ICP, or OEM may be required to grant to Microsoft on reasonable and nondiscriminatory terms a license to any intellectual property rights it may have relating to the exercise of their options or alternatives provided by this Final Judgment; the scope of such license shall be no broader than is necessary to insure that Microsoft can provide such options or alternatives.

Competitors are required to license their property to Microsoft in order to get relief from Microsoft's anticompetitive practices.

> J. No provision of this Final Judgment shall:
>
> 1. Require Microsoft to document, disclose or license to third parties: (a) portions of APIs or Documentation or portions or layers of Communications Protocols the disclosure of which would compromise the security of a particular installation or group of installations of anti-piracy, anti-virus, software licensing, digital rights management, encryption or authentication systems, including without limitation, keys, authorization tokens or enforcement criteria; or (b) any API, interface or other information related to any Microsoft product if lawfully directed not to do so by a governmental agency of competent jurisdiction.

This provision gives Microsoft the ability to withhold APIs crucial for the development of applications. Prevent Microsoft from conditioning any license of any API, Documentation or Communications Protocol related to anti-piracy

systems, anti-virus technologies, license enforcement mechanisms, authentication/authorization security, or third party intellectual property protection mechanisms of any Microsoft product to any person or entity on the requirement that the licensee:.. (b) has a reasonable business need for the API, Documentation or Communications Protocol for a planned or shipping product,

This allows Microsoft to see ISV planned products in advance and control the development of potential competition

(c) meets reasonable, objective standards established by Microsoft for certifying the authenticity and viability of its business,

This allows Microsoft to decide which ISVs can compete against Microsoft.

(d) agrees to submit, at its own expense, any computer program using such APIs, Documentation or Communication Protocols to third-party verification, approved by Microsoft, to test for and ensure verification and compliance with Microsoft specifications for use of the API or interface, which specifications shall be related to proper operation and integrity of the systems and mechanisms identified in this paragraph.

This forces all ISVs to have their products certified by Microsoft and to expose their operations to Microsoft.

XII. CONCLUSION

The failure of the PFJ to create a meaningful chance for competition in the industry undercuts any claim that a "certain" quick fix sooner is better than taking sufficient and reasonable time to develop a better solution. The PFJ is simply no solution at all.

Importantly, a better solution is already on the table—in the form of the proposal laid out by the still litigating attorneys general (see Exhibit XII-1). That proposal is faithful to the case and to the public interest as defined by the nation's antitrust laws.

EXHIBIT XII-1

THE LITIGATION STATES REMEDIAL PROPOSALS ARE AN EFFECTIVE REMEDY

PRACTICE	REMEDY	LITIGATING STATES' REMEDIAL PROPOSALS
UNDER THE TABLE	Liability Under Law	1, 11, 15, 20
APPLICATIONS BARRIER TO ENTRY	Port office to competing OS	14
	Remedy applies to	1, 3
	"Windows Family"	
	Applications	
	Distribution channels	
	ISVs	
CONTRACT		
Exclusive/Preferential	Ban exclusives	6
	Prohibition on discrimination	2, 7
	Price	
	Functionality	
	Support	
	Testing	
	Marketing	
	Other "inducements"	
Ban NDAs		15
Indirect Sales/Hidden Price	Transparent prices	2
QUALITY IMPAIRMENT		
Resource Denial	Prohibition on discrimination	2
Incompatibility/Integration	Access to source code	4, 5
Disabling	API disclosure	4, 5
	Neutral warning message	
Desupporting	Support older OS	3, 16
	Provide training	4
BUNDLING		
OS Tying	Spin off browser	12, 13
Imitation	Separate sale requirement	1
PRICE ABUSE		
Discrimination/Secret Price	Transparent prices	1, 2
Cross-subsidy/Predation	Transparent prices, separate sale	1, 2
Upgrade Policy	Restrict old OS price increase	
	Backward compatibility	
Excessive functionality	Support older OS versions	3
	Backward compatibility	3
CONSUMER HARM		
Impairing Non-Microsoft	API disclosure,	4
Thwarting Responses	Boot screen, start sequence	2, 10
	freedom	
Forcing Inefficient Acquisition	Ban exclusives	6
	Prohibition on discrimination	8, 9