Is it a Tie-In or an Integration? *U.S. v. Microsoft* Weighs In

Dustin Rowles[†]

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I. Introduction

After years of obscurity, Bill Gates and Microsoft have revived interest in antitrust jurisprudence.[1] On May 18, 1998, the Antitrust Division of the Department of Justice ("DOJ") along with twenty states, filed suit against Microsoft for allegedly violating Sections 1 and 2 of the Sherman Antitrust Act.[2] In *United States v. Microsoft II* ("Microsoft II"), the DOJ alleged that in order to protect Microsoft's monopoly of its ubiquitous Windows operating system, Microsoft has unjustifiably bundled its web browser, Internet Explorer ("IE"), with Windows and entered into exclusionary practices in an effort to drive Netscape's web browser, Navigator, from the market.[3] This Update will focus solely on the second count of the DOJ's complaint: "Unlawful Tying in Violation of Section 1 of the Sherman Act."[4]

Microsoft II raises important issues in the law of tying. Judge Jackson's recently released conclusions of law strike a blow to Microsoft's position that the company legally integrated IE with Windows, and instead side with the DOJ, finding that Microsoft has unlawfully tied IE to the Windows operating system.[5] Jackson's conclusions of law, however, present an anomaly in the evolution of tying jurisprudence, since they mark the first time a court has overlooked its institutional incompetence in the high technology ("high-tech") arena.[6] Thus, instead of deferring to the plaintiff's plausible assertions about the efficiency of integration like past courts have,[7] the *Microsoft II* court has second-guessed the design decisions of a high-tech company.

This Update will track the evolution of tying law as it relates to anticompetitive high-tech design behavior, starting with the landmark case challenging IBM's introduction of a new computer system that integrated memory, which was previously plugged in externally, into the computer's central processing unit ("CPU").[8] This Update will then examine the different approaches courts have taken, before discussing the D.C. Circuit's ruling in the precursor to the current Microsoft case, *United States v. Microsoft I* ("Microsoft I"). This Update will then conclude by showing how the conclusions of law in *Microsoft II* have frustrated the careful development of tying jurisprudence over the last twenty years. Before reviewing the case law, however, this Update will briefly explain the nuts and bolts of tying.

II. What is Tying?

A tying arrangement arises when a seller conditions the sale of one product or service (the tying product) on the purchase of a separate product or service (the tied product).[9] It can also arise where there is an agreement that the purchaser of the tying product cannot purchase the tied product from another seller.[10] The competitive effect of tying is foreclosure of both other competing sellers from selling the tied products to purchasers, and the purchasers' access to those competing sources.[11] The courts have developed a relatively simple test designed to detect so-called "per se illegal" tying arrangements. To determine whether an alleged unlawful tie has occurred, the court must ask: (1) whether there were "separate tying and tied products;" (2) whether there was "'actual coercion by the seller'" forcing the "'buyer to accept the tied product;'" (3) the market power of the seller; (4) "'anticompetitive effects in the tied market;'" and (5) the amount of involvement in interstate commerce.[12] Despite the test, "[m]ost courts permit various justifications to be offered even when tie-ins are analyzed under the per se rule."[13] Therefore, the per se analysis in tying cases is actually "whether the efficiencies claimed for the tie are sufficient to offset any consumer losses that result from increased opportunities to exercise market power."[14] Most often, courts balance the defendant's market power with considerations of efficiency—the more market power the defendant has gained from the tie-in, the more efficient the product need be.[15] Unfortunately, however, in cases involving high-technology, the institutional competence of the judicial system is called into question, and determinations of efficiency are difficult to ascertain.[16] Thus, the focus of this Update is to explore the appropriate role of an antitrust court in determining whether or not the tying of a technological product is efficient enough to pass muster under antitrust laws.

III. The Early Cases

In 1973, IBM faced allegations of unlawful tying of technology in *Telex Corp. v. IBM Corp.*[17] Telex, a competing memory manufacturer, accused IBM of tying its memory and CPU together in their 370 system, the next generation computer.[18] Faced with technologically superior "plug compatible" devices, IBM bundled the CPU and memory control together in order to reduce competition that was chipping away at IBM's share of the peripheral market.[19] Despite this evidence, the court held that the bundling was an integrated product because it was technologically superior.[20] The new product ran faster than the non-integrated version and it was less expensive.[21] The court stated that "[w]hile . . . there is some evidence that [IBM's] actions . . . were designed to help stem the growth of its plug compatible competition, we conclude that the predominant evidence demonstrates that they really represented technological advancements."[22] The court formulated a rule that if the new product is technologically superior than the original product, then it is beyond the scope of the antitrust laws.[23] The designer escapes liability regardless of anticompetitive intent.

Moreover, the court injected a common theme of tying jurisprudence into its decision—extensive deference to the bundling manufacturer's assertions of technological superiority.[24] In fact, the court based much of its decision against a finding that it was a tied product on the untechnological fact that the memory control and CPU were in the same box: "[w]here a court is

dealing with what physically and in fact is a single product," the court should "not contemplate judicial dissection of that product into parts and the reconstitution of these parts into a tying agreement."[25] In deferring to IBM's position, the court reasoned that "[t]o rule otherwise would enmesh the courts with technical and uncertain inquiry into the technological justifiability of functional integration and cast unfortunate doubt on the legality of product innovations in serious detriment to the industry and without legitimate antitrust purpose."[26] Thus, the standard of judicial deference to defendants in technological matters was set.

The next case in the canon of high-tech tying cases was the Fifth Circuit's intent based decision in *Response of Carolina, Inc. v. Leasco Response, Inc*.[27] Leasco was a computer time-sharing company that leased computer time to small businesses.[28] Customers had terminals they used to dial in to Leasco's computers in order to perform tasks such as inventory control and payroll.[29] Response of Carolina bought a franchise from Leasco that allowed Response to provide Leasco time-sharing services in Charlotte, North Carolina.[30] Response complained that Leasco forced it to lease a particular hardware configuration as a condition of its purchase of a Leasco franchise because it would be technologically impossible for Response of Carolina to configure other hardware for the Leasco software.[31] Response argued that this condition was an illegal tying arrangement.[32]

The *Leasco* court found a tying arrangement absent because there was no evidence that Leasco would refuse to turn over the technical information needed to duplicate Leasco's operating system to Response of Carolina if they had asked for that information.[33] The court further noted that if a product is designed based on technological superiority, and not with an anticompetitive purpose, then it would pass muster under antitrust laws.[34]

In *In re Data General Corp. Antitrust Litigation*, a California federal district court decided another technological tying case similar to *Telex*.[35] Like IBM in *Telex*, Data General bundled memory boards and software to the sale of its CPU.[36] Similar to the *Telex* court, the *In re Data General* court essentially followed the rule that any design that is cheaper for the consumer escapes liability under antitrust laws.[37]

Foremost Pro Color, Inc. v. Eastman Kodak Co. presented the federal courts with the next challenge in the line of tying cases.[38] Kodak developed a new camera, the 110 Instamatic, which required a new type of film that essentially rendered the old film obsolete.[39] Because the new film required a different developing process than the old film, other film developers had to make substantial investments in order to compete with Kodak's photofinishing market.[40] Therefore, Foremost alleged that Kodak was tying its camera to the new film in violation of Section 1 of the Sherman Antitrust Act.[41]

The court held in favor of Kodak for a number of reasons. First, because Kodak did not require consumers to buy the film as a condition to the sale, the court did not find the requisite coercion essential for establishing a per se unlawful tying arrangement.[42] The court did not impose a per se illegal tying rule on the basis of design alone.[43] In doing so, the court explained that "such a rule could become a roadblock to the competition vital for an ever

expanding and improving economy. Product innovation, particularly in such technologically advancing industries as the photographic industry, is in many cases the essence of competitive conduct."[44] The court was unpersuaded that the absence of competition with respect to the technologically tied product was sufficient evidence to find an illegal tying arrangement.[45] The court reasoned that a short-term lack of competition in the relevant market could be explained by either an "unwillingness or inability of competitors . . . to match the pace of technological development set by the industry's leader . . . ."[46]

In another case involving IBM, *Innovation Data Processing v. IBM*, the plaintiffs accused IBM of tying its operating system to a certain software program that competed with Innovation's software.[47] IBM asserted technological reasons for the integration, and the court was persuaded: "[R]ather than constituting an illegal tying arrangement, [the integration] instead constitutes . . . a lawful package of technologically interrelated components."[48] Adhering to the language and rationale of *Foremost*, the court ruled that the development and introduction of a system of technologically interrelated products "'is not sufficient alone to establish a per se unlawful tying arrangement even if the new products are incompatible with the products then offered by the competition and effective use of any one of the new products necessitates purchase of some or all of the others.'"[49] The court further noted that even if each component were priced and sold separately, there would be no tying arrangement provided that there was an integrated product.[50] Thus the *Innovation* court not only followed the general rule of *Telex*, but also relaxed it even further in favor of the litigant arguing technological integration. It is from this general attitude of judicial deference that *Microsoft II* departs. Before reaching that decision, this Update will review the prior case history.

IV. *Microsoft I*

Instead of selling its Windows operating system[51] outright, Microsoft licenses Windows to personal computer manufacturers on the condition that they agree to license, pre-install, and distribute Microsoft's Internet browser, IE.[52] Thus, manufacturers must ship IE with Windows 95 and Windows 98, and they are prohibited from removing IE from either operating system.[53]

In *Microsoft I*, the D.C. Circuit heard an appeal from the district court's grant of a preliminary injunction preventing Microsoft from forcing computer manufacturers who license its Windows operating system to license IE as well.[54] The government had accused Microsoft of civil contempt by violating a consent decree it had signed with Microsoft following a 1994 case.[55] The prior consent decree, however, contained a critical ambiguity in that it could not be construed to prohibit Microsoft from developing integrated products.[56] Microsoft seized upon that ambiguity to defend against the DOJ's claim of unlawful tying, arguing that it had simply integrated the product as allowed by the decree.[57] Indeed, Microsoft only agreed to sign the consent decree on the condition that it was allowed to incorporate new features into its operating system.[58]

The district court found that although there was "sufficient independent consumer demand" for the two products to warrant issuing the decree, Microsoft was correct in its assertion

that "when . . . combined, Windows and . . . [IE] . . . constitute a single product."[59] Thus, the D.C. Circuit court reversed the district court's preliminary injunction because the packaging of Windows 95 and IE constitute a "genuine integration."[60]

In its analysis of tying law, the D.C. Circuit essentially created "a rule of per se *legality* for products characterized as integrated."[61] The court held that an "'integrated product'" is one that "combines functionalities (which may also be marketed separately and operated together) in a way that offers advantages unavailable if the functionalities are bought separately and combined by the purchaser."[62] Essentially, the test has two prongs: (1) the combination "must be different from what the purchaser could create from the separate products on his own," and (2) the combined form must "be better in some respect."[63] Moreover, the court re-iterated the common theme of deference in high-tech tying cases: "A court's evaluation of a claim of integration must be narrow and deferential."[64] "[T]he limited competence of courts to evaluate high-tech product designs and the high cost of error [suggests this deference]."[65]

The integration met the first prong because, despite the ability of consumers to buy IE separately, the act of combination that brings together the browser functionality and the other functionalities provided by the operating system "'is the creation of the design that knits the two together.' Microsoft created that design and thus combined the products."[66] Furthermore, the integration met the second prong of the test because it seemed "to enhance both browsing and non-browsing functionalit[ies]" of the operating system.[67] The D.C. Circuit, stressing judicial systems' inability to second-guess design decisions in high-tech markets, "resolved the problem of institutional competence by largely deferring to Microsoft's 'plausible' assertions about the efficiency of integration. . . . [Indeed, j]udicial intervention in this process runs the risk of long-lived and costly errors."[68] The court's rationale particularly holds true where the vast majority of PC buyers would prefer an operating system with an Internet browser pre-installed.[69] In sum, the D.C. Circuit in *Microsoft I* went the way of its legal forebears in the high-tech area: where the product is faster and cheaper when integrated than when sold separately, judicial deference is the standard.

V. *Microsoft II*

In 1998, the DOJ and twenty states filed suit against Microsoft alleging, among other charges, that Microsoft unlawfully tied IE to the Windows operating system.[70] Judge Jackson, presiding over the district court, released his conclusions of law on April 5, 2000.[71] As in *Microsoft I*, Judge Jackson's conclusions of law were consistent with the DOJ's allegations that, indeed, Windows and IE are distinct products because they are sold separately and there is independent consumer demand for them.[72] Accordingly, Judge Jackson's conclusions of law circumvent the holding in *Microsoft I* and rules that Microsoft unlawfully tied IE to Windows.[73] The ruling contradicts the view that many academics and commentators have taken – that Microsoft should prevail because of the integration that IE and Windows 98 achieved.[74] The conclusions of law, by contrast, create an anomaly in high-tech tying jurisprudence, which generally holds that if the integration is cheaper and technologically superior, courts should defer

to the high-tech defendant.[75]

In fact, some argue that allowing Microsoft to integrate IE into Windows is both appropriate and necessary.[76] A personal computer with both an operating system and an Internet browser allows consumers "to access the Internet directly while using various applications programs."[77] Future innovation would be limited if Microsoft were not allowed to integrate new applications into Windows.[78] Moreover, Microsoft has a long history of improving its operating system by adding new functions initially offered as a separate product.[79] "Indeed, 'nearly every new feature incorporated into . . . [Microsoft's] operating system over the last sixteen years was once available separately.'"[80] The integration of IE into Windows merely allows users to access "the Internet as an alternate source of reference. Microsoft's competitors are free to incorporate new functions into their software products. It would be unfair to Microsoft, and detrimental to consumers, to preclude Microsoft from doing the same thing."[81]

Besides the fact that consumers prefer an operating system with an integrated Internet browser,[82] other sound reasons exist, beyond mere consumer preference, for integrating browser functionality into Windows rather than creating a free-standing product.[83] First, consumers can use IE just like they use Windows, as an interface.[84] Second, Microsoft's development of browser functionality has stimulated competition forcing other firms to offer software providing web browsing functionality.[85] Third, Microsoft asserts that there is no separate demand for an operating system without browsing functionality.[86] Lastly, because the licensing of Internet Explorer is free, consumers have been able to enjoy browsing functionalities "without paying a higher price."[87]

Yet Judge Jackson's conclusions of law ignore the rate and complexity of new technology and the belief that if courts interfere with the market process, they "are likely to make costly mistakes . . . ."[88] Indeed, according to Microsoft's defense, "antitrust can hinder the market's self-correcting process by reducing the reward for innovation."[89] Innovation such as the type that Microsoft undertook in its operating system can actually encourage pro-competitive conduct.[90] Moreover, "the line between the operating system and [its] applications is indistinct and permeable."[91] Where an integration is technologically superior and cheaper than selling the products separately, judicial deference to high-tech parties may be preferable, particularly when there is a risk of stifling innovation in a free-market society.

VI. Conclusion

This Update has reviewed tying jurisprudence in high-tech cases. The previous cases in this field demonstrate the courts' deference to the high-tech litigant where the new product is technologically superior or cheaper than the original product. These cases also suggest that the court should also give extensive deference to the alleged violator's assertions of technological superiority.

Using this precedent as a foundation, the court in *Microsoft I* reintroduced the common theme of deference in the high-tech arena. The *Microsoft I* court held that so long as the

combined product is better than the original, and different than what the purchaser could buy on his own, then the product should be considered integrated. Moreover, the D.C. Circuit, as earlier courts did on the same issue, stressed the importance of deferring to Microsoft's plausible assertions about efficiency of integration.

Judge Jackson in *Microsoft II*, however, departs from the established line of precedent in high-tech tying jurisprudence. Jackson downplays Microsoft's plausible assertions. Instead, he injects the court's institutional incompetence in the field of high-technology, ruling against the combination of IE and Windows despite the technological superiority and the decreased expense of the integrated product. Such an approach is misguided in light of the clear precedent requiring deference to high-tech litigants.

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† B.A. (Communications) 1997, University of Arkansas; J.D. (anticipated), 2001, Boston University School of Law.

[1] Many consider this to be the most important antitrust case since *United States v. AT&T*, 461 F. Supp. 1314 (D.D.C. 1978). *See* Abbott B. Lipsky, Jr. & J. Gregory Sidak, *Essential Facilities*, 51 STAN. L. REV. 1187, 1189 (1999) ("[The Microsoft litigation] is widely regarded as the most consequential antitrust case prosecuted by the federal government since the IBM and AT&T cases . . . .").

[2] *See generally* Complaint ¶¶ 1-141, United States v. Microsoft Corp., 65 F. Supp.2d 1 (D.D.C. 1999) (No 98-1232), *available in 1763.HTM* (last modified Dec. 3, 1998) <http://www.usdoj.gov/atr/cases/f1700/1763.htm> [*hereinafter* 1998 Complaint] (alleging numerous violations of federal antitrust law). Section 1 of the Sherman Act provides that

> [e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is hereby declared to be illegal. Every person who shall make any contract or engage in any combination or conspiracy hereby declared to be illegal shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding $10,000,000 if a corporation, or, if any other person, $350,000, or by imprisonment not exceeding three years, or by both said punishments, in the discretion of the court.

15 U.S.C.A. § 1 (1997). Section 2 provides that

> [e]very person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding $10,000,000 if a corporation, or, if any other person, $350,000, or by imprisonment not exceeding three years, or by both said punishments, in the discretion of the court.

15 U.S.C.A. § 2.

[3] *See id.* 1998 Complaint, *supra* note 2, ¶¶ 5,18-19. The "web" is a series of electronic documents housed in different computers throughout the Internet, capable of supporting multimedia applications. *See* ACLU v. Reno, 929 F. Supp. 824, 836 (E.D. Pa. 1996). A "web browser" is a software application (either text-based or graphical) that lets users browse the web. *See High-Tech Dictionary Definition* (last modified Feb. 20, 2000) <http://www.currents.net/resources/dictionary/definition.phtml/?lookup=5698>.

[4] 1998 Complaint, *supra* note 2, ¶¶ 134-137; *see also* 15 U.S.C.A. § 1.

[5] *See* United States v. Microsoft Corp., No. 98-1233, 2000 U.S. Dist. LEXIS 4014, at *2 (D.D.C. April 5, 2000).

[6] *See infra* Part III.

[7] *See infra* Part III.

[8] "The CPU controls the operation of a computer. Units within the CPU perform arithmetic and logical operations and decode and execute instructions. In microcomputers, the entire CPU is on a single chip." *High Tech Dictionary Definition* (last modified Feb. 20, 2000) <http://www.currents.net/resources/dictionary/definition.phtml?lookup=32>.

[9] *See In re* Data Gen. Corp. Antitrust Litig., 490 F. Supp. 1089, 1100 (N.D. Cal. 1980); Northern Pacific Ry. Co. v. United States, 356 U.S. 1, 5 (1958).

[10] *See id.* at 6.

[11] *See id.*

[12] *See* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE, § 10.1 (2d ed. 1994).

[13] *Id.* § 10.5b (1994).

[14] *Id.*

[15] *See id.*

[16] *See infra* Part III.

[17] 367 F. Supp. 258 (N.D. Okla. 1973).

[18] *See id.* at 268.

[19] *See id*. at 272, 306. Devices that IBM's competitors manufactured were plug compatible because they could be plugged into an IBM system and function with IBM CPUs. *See id.* at 272. End-users thus had the option of using either an IBM or a competitor's peripheral device. *See id*.

[20] *See id*. at 347.

[21] *See id.*

[22] *Id.* at 342

[23] *See id.*

[24] *See id.* at 347.

[25] *Id.*

[26] *See id.*

[27] 537 F.2d 1307 (5th Cir. 1976).

[28] *See id.* at 1310.

[29] *See id.* at 1326.

[30] *See id.* at 1310.

[31] *See id.* at 1329.

[32] *See id.*

[33] *See id.* at 1329-30. The court noted that refusal to release such "unique proprietary information" would still not be a violation unless the technology had been specifically designed to create a tie rather than improved technology. *See id.* at 1330.

[34] *See id.* at 1330.

[35] 490 F. Supp. 1089 (N.D. Cal. 1980).

[36] *See id.* at 1097.

[37] *See id.* at 1109.

[38] 703 F.2d 534 (9th Cir. 1983).

[39] *See id.* at 537 (citing Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 277-78 (2d Cir. 1979)).

[40] *See id*. at 542.

[41] *See id*. at 537.

[42] *See id.* at 542. Nor did the court recognize an implicit coercion, because "Foremost was not forced 'to accept the tied item and forego possibly desirable substitutes,'" since there were no substitutes available. *Id.* at 542 n.4. (internal citation omitted).

[43] *See id.* ("We do not believe that, standing alone, such technological interrelationship among complementary products is sufficient to establish the coercion essential to a *per se* unlawful tying arrangement.").

[44] *Id.*

[45] *See id.*

[46] *Id.*

[47] 585 F. Supp. 1470, 1471-73 (D.N.J. 1984). IBM released an updated version of its MVS operating system

known as IPO-"J" (Installation Productivity Option J). *See id.* at 1472-73. A format change forced users to purchase a "DFDSS" software program from IBM in order to perform "dump-restore" functions. *See id.* Previously users had been able to purchase Plaintiff Innovation's "FDR" software which performed the same functions as IBM's DFDSS system. *See id.*

[48] *Id.* at 1476.

[49] *Id*. (quoting Foremost Pro Color v. Eastman Kodak Co., 703 F.2d 537, 542-43 (9th Cir. 1983)).

[50] *See id.* (quoting International Mfg. Co. v. Landon, Inc., 336 F.2d 723, 730 (9th Cir. 1964)).

[51] *Microsoft I* provides a description of an operating system:

> An operating system is, so to speak, the central nervous system of the computer, controlling the computer's interaction with peripherals such as keyboards and printers. Windows 95 is an operating system that integrates a DOS shell with a graphical user interface, i.e., a technology by which the operator performs functions not by typing at the keyboard but by clicks of his mouse. Operating systems also serve as "platforms" for application software such as word processors.

United States v. Microsoft Corp., 147 F.3d 935, 938 (D.C. Cir. 1998).

[52] *See* 1998 Complaint, *supra* note 2, ¶ 18. In fact,

> Microsoft [also] licenses copies of its software programs directly to consumers. The largest part of its MS-DOS and Windows sales, however, consists of licensing the products to manufacturers of PCs . . . such as the IBM PC Company and the Compaq Computer Corporation ("Compaq"). An OEM typically installs a copy of Windows onto one of its PCs before selling the package to a consumer under a single price.

United States v. Microsoft Corp., 65 F. Supp. 2d 1, 4 (D.D.C 1999).

[53] *See* 1998 Complaint, *supra* note 2, ¶¶ 18-20.

[54] *See Microsoft I*, 147 F.3d at 938.

[55] *See id*. at 939-40.

[56] *See id.* at 939.

[57] *See Microsoft I*, 980 F. Supp. 537, 540-41 (D.D.C. 1997), *rev'd*, 147 F.3d 935 (D.C. Cir. 1998).

[58] *See id*. at 540.

[59] *Id*. at 544.

[60] *Microsoft I*, 147 F.3d at 952.

[61] John E. Lopatka & William H. Page, *Antitrust On Internet Time: Microsoft and the Law and Economics of Exclusion*, 7 SUP. CT. ECON. REV. 157, 198 (1999).

[62] *Microsoft I*, 147 F.3d at 948.

[63] *Id.* at 949.

[64] *Id.* at 951 n.13, 949-50.

[65] *Id.* at 950 n.13.

[66] *See* Lopatka & Page, *supra* note 61, at 199 (quoting *Microsoft I*, 147 F.3d at 952).

[67] *Id*.

[68] *Id*. at 199-200.

[69] *See id.* at 200. Moreover, "[t]he Court has never imposed an antitrust duty on monopolists to cater to the demands of every group of buyers simply because those buyers are willing to pay the price of their idiosyncrasies." *Id.* at 203.

[70] *See* 1998 Complaint, *supra* note 2, ¶¶ 18-19.

[71] *See* United States v. Microsoft Corp., No. 98-1233 2000 U.S. Dist. LEXIS 4014, at *2 (D.D.C. April 5, 2000).

[72] *Compare* United States v. Microsoft Corp., 980 F. Supp. 537, 541 (D.D.C. 1997) ("[N]early every new feature incorporated into its operating systems over the last sixteen years was once available separately.") *with Microsoft II*, No. 98-1233 2000 U.S. Dist. LEXIS 4014, at *58 (D.D.C. April 5, 2000) ("As for the crucial requirement that Windows and Internet Explorer be deemed separate products for a finding of technological tying liability, this Court's Findings mandate such a conclusion. Considering the character of demand for the two products, as opposed to their functional relation, Web browsers and operating systems are distinguishable in the eyes of buyers.).

[73] *See Microsoft II*, No. 98-1233 2000 U.S. Dist. LEXIS 4014, at *42 (D.D.C. April 5, 2000) (stating that "while the Court agrees with plaintiffs, and thus holds that Microsoft is liable for illegal tying under § I, this conclusion is arguably at variance with a decision of the U.S. Court of Appeals for the D.C. Circuit in a closely related case.").

[74] *See* Thomas A. Piraino, Jr., *An Antitrust Remedy for Monopoly Leveraging by Electronic Networks*, 93 NW. U. L. REV. 1, 45 (1998).

[75] *See* Telex Corp. v. IBM, 367 F. Supp. 258, 342 (N.D. Okla. 1973) (holding that if the new product was technologically superior than the original product, then it is beyond the scope of antitrust laws); *see also* Response of Carolina, Inc. v. Leasco Response, Inc., 537 F.2d 1307, 1330 (5th Cir. 1976) (noting that if a product is designed based on technological superiority, and not for anticompetitive purposes, then it would pass muster under antitrust laws); In re Data Gen. Corp. Antitrust Litig., 490 F. Supp. 1089, 1109 (N.D. Cal 1980) (ruling that any design that is cheaper for the consumer may evade liability under antitrust laws); Foremost Pro Color v. Eastman Kodak Co., 703 F.2d 534, 542 (9th Cir. 1983) (rejecting a rule of finding a per se tying arrangement on the basis of design alone); Innovation Data Processing v. IBM, 585 F. Supp. 1470, 1476 (D.N.J. 1984) (holding that technological reasons for integration were lawful under antitrust laws); *Microsoft I*, 147 F.3d 935, 949-50 (D.C. Cir. 1998) ("A court's evaluation of a claim of integration must be narrow and deferential.").

[76] *See* Piraino, *supra* note 74, at 46.

[77] *Id*.

[78] *See id.*

[79] *See id.* For instance, after selling each feature separately, Microsoft integrated "new functions such as the graphical user interface, memory management, type fonts, disk compression, and networking." *Id.*

[80] *Id.* (quoting United States v. Microsoft Corp., 980 F. Supp. 537, 541 (D.D.C. 1997), *rev'd*, 147 F.3d 935 (D.C. Cir. 1998).

[81] Piraino, *supra* note 74, at 46-47 (citations omitted).

[82] *See* Lopatka & Page, *supra* note 61, at 200.

[83] See Answer ¶ 11, United States v. Microsoft Corp., 65 F. Supp. 2d 1 (D.D.C 1999) (No. 98 1232), *available in* <http://www.microsoft.com/presspass/doj/7 28answerdoj.htm> (last modified Oct. 11, 1999).

[84] *See id*. ¶ 66.

[85] *See id.* ¶ 11.

[86] *See id.* ¶ 104.

[87] Piraino, *supra* note 74, at 47 n.240, 48.

[88] Lopatka & Page, *supra* note 61, at 160.

[89] *Id*.

[90] *See* Piraino, *supra* note 74, at 47.

[91] Lopatka & Page, *supra* note 61, at 193.