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# A Comparison Between U.S. and E.U. Antitrust Treatment of Tying Claims Against Microsoft: When Should the Bundling of Computer Software Be Permitted?

*James F. Ponsoldt\* & Christopher D. David\*\**

Most consumers of computer equipment likely would support the continued practice by computer marketers of including various software with an operating system at no apparent additional price. The economies applicable when the dominant system manufacturer—Microsoft, for example—bundles Windows XP together with its media player and messenger services, save many consumers time and money.

Such bundling practices, however, may also have the effect of making it difficult for smaller software producers to enter and compete in those ancillary software markets and, ultimately, provide additional innovation. As innovation markets expand worldwide, the question of whether antitrust regulators should permit or forbid a dominant firm in technology markets to bundle several products has become increasingly critical and divisive.

In recognition of the benefit of harmonizing competition policies worldwide, the Justice Department's chief antitrust enforcer, H. Hewitt Pate, in 2005 listed "pursuing international convergence in cartel enforcement" and "establishing an approach to dealing with unilateral conduct that does not chill innovation" as two of the three main goals for U.S. antitrust enforcement.<sup>1</sup>

The divergent treatment of software bundling by Microsoft, as suggested above, in the United States<sup>2</sup> and European Union,<sup>3</sup> respectively,

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<sup>1</sup> See CCH Trade Reg. Reports No. 885, Apr. 6, 2005, at 2.

<sup>2</sup> See, e.g., *United States v. Microsoft Corp.*, 87 F. Supp. 2d 30 (D.D.C. 2000), *rev'd in part*, 253 F.3d 34 (D.C. Cir. 2001) [hereinafter *Microsoft III*], discussed *infra* at notes 104–28. and accompanying text. In general, the D.C. Circuit found that Microsoft's tying

has become Exhibit A in support of the relevance of Mr. Pate's goals. Much more recently, in fact, the Korean Fair Trade Commission ("KFTC") has entered the debate on the side of the European Union.<sup>4</sup> On December 7, 2005, the KFTC found Microsoft's bundling practices to be in violation of Korea's Monopoly Regulation and Fair Trade Act.<sup>5</sup>

In response to that decision, Bruce McDonald, the antitrust division's deputy assistant attorney general, made clear that the Justice Department agrees with Microsoft and the position of the D.C. Circuit, described below, and fundamentally rejects condemnation of software bundling by Microsoft:

We had previously consulted with the [Korean Fair Trade] Commission on its Microsoft case and encouraged the Commission to develop a balanced resolution that addressed its concerns without imposing unnecessary restrictions. Sound antitrust policy should protect competition, not competitors, and must avoid chilling innovation and competition even by 'dominant' companies. Furthermore, we believe that regulators should avoid substituting their judgment for the market's by determining what products are made available to consumers.<sup>6</sup>

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arrangements were not unlawful.

<sup>3</sup> See Case COMP/C-3/37.792, *Microsoft Corp. v. Commission*, (unreported, Mar. 24, 2004) (CEC), available at <http://europa.eu.int/comm/competition/antitrust/cases/decisions/37792/en.pdf>, discussed *infra* at notes 148–72 and accompanying text. In the context of this litigation, Microsoft announced on January 25, 2006 that:

[I]t will license all the Windows operating system software source code for the technologies covered by a March 2004 decision of the European Commission ["E.C."] in order to address E.C. concerns that it is not complying with the remedies imposed on the company. On March 24, 2004, the E.C. concluded that Microsoft broke European Union competition law by leveraging its near monopoly in the market for PC operating systems onto the markets for work group server operating systems and for media players.

CCH Trade Reg. Reports No. 928 at 5–6 (Feb. 1, 2006).

According to a December 22, 2005, E.C. Statement of Objections, "Microsoft has failed to disclose complete and accurate interface documentation to allow non-Microsoft workgroup servers to achieve full interoperability with Windows PCs and servers, despite its obligation to do so under the terms of the E.C.'s March 2004 decision that Microsoft was abusing its dominant market position." CCH Trade Reg. Reports No. 928 at 5–6 (Feb. 1, 2006).

<sup>4</sup> See CCH Trade Reg. Reports No. 921, Dec. 14, 2005, at 2–3.

<sup>5</sup> *Id.* "The KFTC contended that [Microsoft] tied its media player and messenger products to its Windows operating system. Microsoft was ordered to pay approximately 33 billion (approximately \$31 million) and to unbundle its media player and messenger products from its windows operating system." *Id.*

<sup>6</sup> *Id.*

Thus, while the policy of the United States is one of comparative deference to efficiencies created by dominant firm behavior,<sup>7</sup> the European Union and KFTC continue to believe that they cannot protect competition without protecting competitors, that competitive markets will be more innovative in the longer term, and that regulators continue to have a role in policing the markets.

This article will analyze the recent U.S. and E.U. judicial approaches to tying charges which stem from software bundling. Part II reviews U.S. tying jurisprudence both generally and as applied to software bundling. Part III outlines the D.C. Circuit's approach to Microsoft's Windows/Internet Explorer bundle. Part IV briefly covers tying jurisprudence in the European Union. Part V describes the European Commission's ("E.C.") analysis of Microsoft's Window/Windows Media Player bundle. By comparing the two approaches, Part VI shows that neither approach is ideal: although the U.S. approach offers too little guidance to software manufacturers seeking to avoid liability and unduly discounts potential losses in innovation from excluded competitors, the E.U. approach stifles dominant software firm innovation and efficiency because the approach is too rigid and formalistic.

## I. INTRODUCTION

Tying, or a tie-in, ordinarily involves the practice of conditioning the sale of one product (the tying good) on the sale of another (the tied good). Tying has been one of the most direct forms of competitive restraint by firms with some degree of market power. By requiring a consumer to purchase one good or service in connection with another more desired product, a seller leverages demand for its tying product against the consumer. The seller thus reduces consumer autonomy and, most pertinent from an antitrust analysis, restrains competition in the market for the tied product.<sup>8</sup>

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<sup>7</sup> This deference was reflected most recently in the Supreme Court's decision in *Verizon Communications v. Law Offices of Curtis v. Trinko*, 540 U.S. 398 (2004), in which Justice Scalia wrote, "The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system. The opportunity to charge monopoly prices—at least for a short period—is what attracts 'business acumen' in the first place; it induces risk taking that produces innovation and economic growth." *Id.* at 407.

<sup>8</sup> See *Ungar v. Dunkin' Donuts of Am., Inc.*, 531 F.2d 1211, 1218 (3d Cir. 1976), *cert. denied*, 429 U.S. 823 (1977). The Court in *Ungar* stated:

[C]oercion is implicit—both logically and linguistically—in the concept of leverage upon which the illegality of tying is premised: The seller with market power in one market uses that power as a 'lever' to force acceptance of his product in another market. If the product in the second market would be accepted any

To impose an effective tying arrangement, the seller must command a strong share of the tying good's market or some other source of leveraging power.<sup>9</sup> By capitalizing on this market power and forcing consumers to purchase the tied product, the seller reduces legitimate competition and gains a competitive advantage in the tied product's market. Moreover, consumers often are forced to purchase a tied product which may be inferior to fill their demand for the tying product—a superior product likely would need no help from a coercive tying arrangement; it can sell itself. Tying interferes with competition in all these ways, and is, therefore, traditionally illegal *per se* when applied by a seller with leveraging power in the tying product. It could be practically reasoned, of course, that whenever a seller successfully forces a tie-in, buyers must perceive that such leveraging power exists.<sup>10</sup>

Bundling products, however, also can create efficiencies. Some economists view the practice of bundling products in a single transaction—a variant of tying—with an increasingly tolerant eye, even when one product enjoys market dominance. One sector in which bundling is increasingly popular is the software industry. Twin forces of innovation—which creates new product functions—and integration—which either combines existing product functions or couples existing to new functions—induce software manufacturers to engage in what looks very much like traditional, *per se* illegal tying. Often, these manufacturers can present compelling cost-saving arguments when faced with a tying accusation.

Although some jurisdictions sympathetically accept these efficiency arguments without question, others are decidedly more reticent. Such a disparity exists between U.S. antitrust and E.U. competition law and is evidenced by recent tying claims brought against the Microsoft Corporation.<sup>11</sup>

While the U.S. courts accommodated Microsoft and created a new rule

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way, because of its own merit, then, of course, no leverage is involved.

*Id.*

<sup>9</sup> See *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 462 (1992) (requiring appreciable economic power in the tying good), *specific holding overruled by Illinois Tool Works Inc. v. Independent Ink, Inc.* 126 S.Ct. 1281, 1284 (2006) (holding that a patented product does not, by virtue of the patent, presumptively provide leveraging power).

<sup>10</sup> See *Int'l Salt Co. v. United States*, 332 U.S. 392, 396 (1947).

<sup>11</sup> In the United States, Microsoft ran afoul of the Department of Justice by bundling Internet Explorer with its Windows operating system. See *Microsoft III*, 253 F.3d 34 (D.C. Cir. 2001). In the European Union, Microsoft was penalized for bundling Windows Media Player with Windows operating system. See *Microsoft Corp. v. Commission*, (COMP/C-3/37.792) (unreported, Mar. 24, 2004) (CEC), available at <http://europa.eu.int/comm/competition/antitrust/cases/decisions/37792/en.pdf>.

for bundling software platforms and applications, the European Union adopted a more traditional approach. The D.C. Circuit opted to analyze software operating system tying under a flexible, if not amorphous, rule of reason.<sup>12</sup> The E.C., however, pursued Microsoft more vigorously on the issue of tying and applied a qualified per se rule of illegality against Microsoft's software bundling practices.<sup>13</sup> Both U.S. and E.U. rules on software tying will, of course, affect the way in which software manufacturers distribute and sell within these jurisdictions.

## II. THE LAW OF TYING IN THE UNITED STATES

### A. Tying Jurisprudence Generally

Chiefly, tying can be challenged under either section 1 of the Sherman Act<sup>14</sup> or section 3 of the Clayton Act.<sup>15</sup> Although these statutes differ in theory and details, they produce a similar standard for analysis of tying.<sup>16</sup> While the Sherman Act applies to both tied goods and services,<sup>17</sup> the Clayton Act's commodity requirement restricts it only to goods.<sup>18</sup> Likewise, the Sherman Act enjoys a broader jurisdictional reach than the Clayton Act.<sup>19</sup> Nonetheless, the test for the legality of tying under either act is functionally the same.<sup>20</sup>

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<sup>12</sup> See *Microsoft III*, 253 F.3d 34.

<sup>13</sup> See *Microsoft Corp.*, (COMP/C-3/37.792).

<sup>14</sup> 15 U.S.C. § 1 (2000).

<sup>15</sup> 15 U.S.C. § 14 (2000).

<sup>16</sup> See, e.g., *Fortner Enters., Inc. v. U.S. Steel Corp.*, 394 U.S. 495, 521 (1969) (interpreting *N. Pac. Ry. Co. v. United States*, 356 U.S. 1 (1958)) ("*Northern Pacific*, in effect, applied the same standards to tying arrangements under the Sherman Act as under the Clayton Act, on the theory that the anticompetitive effect of a tie-in was such as to make the difference in language in the two statutes immaterial.>").

<sup>17</sup> See, e.g., *N. Pac. Ry. Co.*, 356 U.S. at 13 (Harlan, J., dissenting) (holding that tying transportation services to lease of real property outside scope of Clayton Act, though reachable under Sherman Act); *Siegel v. Chicken Delight*, 448 F.2d 43 (9th Cir. 1971), *cert. denied*, 405 U.S. 955 (1972) (holding that a tie-in of franchise to franchisee's purchasing exclusively from franchisor violated § 1 of the Sherman Act).

<sup>18</sup> See Clayton Act, § 3 (prohibiting certain contracts for sale of "goods, wares, merchandise, machinery, supplies, or other commodities"); 9 PHILIP AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 1700e, at 10 (2d ed. 2000) (noting the lack of importance of § 3's limitations because § 3 "applies only to 'commodities' for resale within the United States").

<sup>19</sup> See *United States v. Am. Bldg. Maintenance Indus.*, 422 U.S. 271 (1975) (holding that the Clayton Act has only in-commerce jurisdiction while the Sherman Act has affecting-commerce jurisdiction, or the entirety of the Commerce Clause).

<sup>20</sup> *Fortner Enters., Inc.*, 394 U.S. at 521 (interpreting *N. Pac. Ry. Co.*, 356 U.S. 1) ("*Northern Pacific*, in effect, applied the same standards to tying arrangements under the Sherman Act as under the Clayton Act, on the theory that the anticompetitive effect of a tie-in was such as to make the difference in language in the two statutes immaterial.>").

The requirements for per se illegal tying violations are four-fold: first, two separate products must exist; second, the defendant directly or practically must condition the sale of the tying product on the purchase of the tied product; third, the defendant must enjoy leveraging power in the tying product's market; and fourth, the practice of tying must foreclose a substantial amount of competition in the tied product's market.<sup>21</sup> Frequently, contentious issues arise in analyzing the first prong, which requires proof of separate products: "the concept of product integration (or its converse, product 'separateness') is the linchpin of the antitrust jurisprudence on tying arrangements. That question is also one of great economic subtlety, for it implicates fundamental theoretical questions of consumer demand and consumer welfare . . . ."<sup>22</sup>

To determine whether two items are separate products or one integrated product, and therefore whether there exists a tying relationship in the first place, the Supreme Court announced a "consumer demand" test in *Jefferson Parish*.<sup>23</sup> First, the Court held that "the answer to the question whether one or two products are involved" does not turn "on the functional relation between them . . . ."<sup>24</sup> Thus, items that are complementary, even to the point that "one . . . is useless without the other" do not necessarily comprise a single product.<sup>25</sup>

Next, the Court stated that a determination of separate or integrated products hinges "on whether the arrangement may have the type of competitive consequences addressed by the rule" proscribing tying.<sup>26</sup> Therefore, "no tying arrangement can exist unless there is a sufficient demand for the purchase of [the tied product] separate from [the tying product] to identify a distinct product market in which it is efficient to offer [the tied product] separately from [the tying product] . . . ."<sup>27</sup> As stated in *Jefferson Parish*, the operative focus in a separate product inquiry is consumer demand for the tied product.<sup>28</sup> Of course, a finding that two separate products are involved, as resulted in *Jefferson Parish*, is merely a prerequisite under traditional tying law to the dispositive question of whether the defendant has leveraging power in the tying product market.

The consumer demand test can be satisfied by either direct or indirect

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<sup>21</sup> See *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 461–62 (1992); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 3 (1984).

<sup>22</sup> J. Gregory Sidak, *An Antitrust Rule for Software Integration*, 18 YALE J. ON REG. 1, 20 (2001).

<sup>23</sup> See *Jefferson Parish*, 466 U.S. at 3. This test was further enunciated in *Image Tech. Servs.*, 504 U.S. at 461–62.

<sup>24</sup> *Jefferson Parish*, 466 U.S. at 19.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* at 21.

<sup>27</sup> *Id.* at 21–22.

<sup>28</sup> *Id.*

evidence. Directly, a plaintiff may offer evidence of demand for the tied product.<sup>29</sup> In the absence of direct evidence, a plaintiff may offer evidence of the behavior of the “competitive fringe.”<sup>30</sup> The competitive fringe’s behavior—or the defendant’s industry’s custom—serves as indirect evidence of consumer demand.<sup>31</sup> If it is customary in the defendant’s industry to combine certain products, then little demand must exist for either product by itself. Conversely, if the defendant is the only firm in its industry to combine the products in question, separate demand for each product is likely to exist.

If a plaintiff can satisfy the consumer demand test and show that the defendant conditioned the sale of the tying product on the purchase of the separate tied product, enjoyed leveraging power in the tying product’s market, and thereby foreclosed a substantial amount of competition in the tied product’s market,<sup>32</sup> the defendant likely will be found in per se violation of antitrust law.<sup>33</sup> Thus, the defendant could not traditionally raise economic efficiency or consumer preference arguments as defenses. Nor will the defendant be able to rebut the plaintiff’s argument that its practices restrain competition.

However, in some instances, courts have not applied a per se rule and instead allow the defendant to continue tying with impunity. If the defendant can produce *certain* business justifications for its practices, which outweigh the potential harm to competition, the court will allow the tie-in. One such permissible business justification requires that the “specifications for a substitute [of a tied product] would be so detailed that they could not practicably be supplied.”<sup>34</sup> Thus, the defendant itself must

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<sup>29</sup> *Id.*

<sup>30</sup> 10 AREEDA & HOVENKAMP, *supra* note 18, ¶ 1744c4, at 200.

<sup>31</sup> See *Jefferson Parish*, 466 U.S. at 22 n.36; see also *Microsoft III*, 253 F.3d 34, 89 (D.C. Cir. 2001).

<sup>32</sup> See *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 461–62 (1992); *Jefferson Parish*, 466 U.S. at 3.

<sup>33</sup> See, e.g., *Int’l Salt Co. v. United States*, 332 U.S. 392, 396 (1947). In *Northern Pacific Railway v. United States*, the Court explained the marketplace rationale for a per se rule against tying arrangements as follows:

When tying arrangements are successfully exacted competition on the merits with respect to the tied product is inevitably curbed . . . . They deny competitors free access to the market for the tied product, not because the party imposing the tying requirements has a better product or a lower price but because of his power or leverage in another market. At the same time buyers are forced to forego their free choice between competing products.

*N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5–6 (1958).

<sup>34</sup> *Standard Oil Co. of Cal. v. United States*, 337 U.S. 293, 306 (1949). This case is commonly referred to as *Standard Stations*.



be allowed to supply the tied product. It is for this reason that an ice cream franchisor can tie the purchase of ice cream ingredients—which are, apparently, difficult to describe—with ice cream making equipment.<sup>35</sup>

A second business justification that renders tying permissible involves a smaller new entrant attempting to gain a “toehold” in a market occupied by powerful, larger competitors.<sup>36</sup> Courts may justify casting a blind eye toward otherwise per se illegal tie-ins by evaluating the overall pro-competitive effects of a more diverse market.<sup>37</sup> The third permissible business justification exists when a defendant uses tie-ins to ensure product quality.<sup>38</sup> However, under this justification, the tie-in must be a last resort to provide a quality product<sup>39</sup> and must cease once no longer necessary to affect a quality product.<sup>40</sup> Finally, the defendant who asserts a justification in response to a tying accusation bears the burden to prove that the tie-in was enacted for a permissible business reason, and not merely as an attempt to restrain trade.<sup>41</sup>

By entertaining these business justifications, courts carve out small exceptions to per se liability for tying.<sup>42</sup> These sui generis exceptions serve as evidence that the courts, like economists, are becoming more receptive to business justifications for tying. The remainder of this Article offers a more

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<sup>35</sup> See *Susser v. Carvel Corp.*, 332 F.2d 505, 515 (S.D.N.Y. 1964), *cert. dismissed*, 381 U.S. 125 (1965).

<sup>36</sup> See, e.g., *Brown Shoe Co. v. United States*, 370 U.S. 294, 330 (1962) (“Thus, unless the tying device is employed by a small company in an attempt to break into a market . . . the use of a tying device can rarely be harmonized with the strictures of the antitrust laws, which are intended primarily to preserve and stimulate competition.”) (internal citations omitted).

<sup>37</sup> See *id.*

<sup>38</sup> See *Dehydrating Process Co. v. A. O. Smith Corp.*, 292 F.2d 653, 656 (1st Cir. 1961); *United States v. Jerrold Elecs. Corp.*, 187 F. Supp. 545, 557 (E.D. Pa. 1960), *aff’d per curiam*, 365 U.S. 567 (1961).

<sup>39</sup> See *Dehydrating Process Co.*, 292 F.2d at 656, wherein the defendant tied a patented silo-unloading device with a patented glass-lined silo. While silos were available from other manufacturers, use of these other silos in conjunction with the defendant’s unloader resulted in frequent malfunction and a fifty percent customer dissatisfaction rate. *Id.* After selling the unloader untied for seven years, the defendants opted to tie the loader and silo to reduce customer complaints and improve product quality. *Id.* The court found this arrangement to be a permissible means to ensure product quality since no other manufacturer made a silo that with specifications that would permit the defendant’s loader to work properly. *Id.*

<sup>40</sup> See *Jerrold Elecs. Corp.*, 187 F. Supp. at 554-60. In *Jerrold Electronics*, the court allowed an electronics manufacturer to tie portions of a cable television master antenna system. *Id.* Although the defendant did not manufacture every component of the system, it was allowed to sell the system only as a whole in order to ensure that the system properly functioned. *Id.* However, the court held that the defendant could only engage in tying until the system was perfected; after such time, the tie-in would no longer be necessary to ensure product quality. *Id.*

<sup>41</sup> *Id.* at 560.

<sup>42</sup> See, e.g., *Int’l Salt Co. v. United States*, 332 U.S. 392, 396 (1947).

recent example of how the American judiciary, through economic analysis, continues to exempt certain situations from the per se rule against tying, while the European Union generally refuses to retreat from per se liability.

### *B. Tying Jurisprudence in Software Bundling*

Instances of courts applying tying law to situations in which a manufacturer conditions the sale of one piece of software on the purchase of another are rare.<sup>43</sup> Most software-related tying claims arise when software is tied to hardware or services,<sup>44</sup> which implicate different economic concerns than in the software bundling context. Thus, the precedent on which the D.C. Circuit Court of Appeals in *Microsoft III* could draw was sparse and, according to the court, of little help.<sup>45</sup>

The first case to address software bundling was *Innovation Data Processing, Inc. v. International Business Machines Corp.*<sup>46</sup> The court was presented with the question of whether IBM's practice of grouping a backup and restore utility program with an operating system ("OS")—which, incidentally, rendered obsolete the plaintiff-competitor's backup utility—amounted to a tying violation of the Sherman Act.<sup>47</sup> The district court alluded to economic efficiencies associated with bundling software programs and found the two programs at issue could be "reasonably considered to constitute parts of a single distinct product" because they were technologically integrated to a sufficient degree.<sup>48</sup> Thus, the court found the two programs at issue comprised an integrated product for efficiency reasons.<sup>49</sup> The court constructed what seems to be an exception to per se liability for tying in this context. It suggested that plaintiffs challenging software bundling as tie-ins must make a stronger showing than

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<sup>43</sup> In *Microsoft III*, 253 F.3d 34, 91–92 (D.C. Cir. 2001), the D.C. Circuit Court of Appeals found only four such cases.

<sup>44</sup> See *id.* at 91 (citing *Digital Equip. Corp. v. Uniq Digital Techs., Inc.*, 73 F.3d 756, 761 (7th Cir. 1996); *Datagate, Inc. v. Hewlett-Packard Co.*, 941 F.2d 864, 870 (9th Cir. 1991); *Digidyne Corp. v. Data Gen. Corp.*, 734 F.2d 1336, 1341–47 (9th Cir. 1984); *Cal. Computer Prods. v. Int'l Bus. Machs. Corp.*, 613 F.2d 727, 743–44; *ILC Peripherals Leasing Corp. v. Int'l Bus. Machs. Corp.*, 448 F. Supp. 228, 233 (N.D. Cal. 1978) (finding that defendant's integration of magnetic disks and a head/disk assembly was not an unlawful tie), *aff'd per curiam sub. nom. Memorex Corp. v. Int'l Bus. Machs. Corp.*, 636 F.2d 1188 (9th Cir. 1980); *Transamerica Computer Co. v. Int'l Bus. Machs. Corp.*, 698 F.2d 1377, 1382–83 (9th Cir. 1983)).

<sup>45</sup> *Microsoft III*, 253 F.3d at 91.

<sup>46</sup> *Innovation Data Processing, Inc. v. Int'l Bus. Machs. Corp.*, 585 F. Supp. 1470 (D. N.J. 1984).

<sup>47</sup> *Id.* at 1471–75.

<sup>48</sup> *Id.* at 1475 (quoting *Int'l Mfg. Co. v. Landon, Inc.*, 336 F.2d 723, 730 (9th Cir. 1964), *cert. denied sub nom., Jacuzzi Bros., Inc. v. Landon, Inc.*, 379 U.S. 988 (1965)).

<sup>49</sup> See *id.*

in other tying cases.<sup>50</sup>

*Innovation Data Processing* could have taken the place of the Microsoft decisions, insofar as software tying, and brought to the Third Circuit's attention the inherent tension between software bundling and tying law. The district court issued its ruling just three days after the Supreme Court handed down *Jefferson Parrish* and made no mention of the newly-minted consumer demand test for whether two separate products were involved.<sup>51</sup> Thus, the case begged for a review, in light of *Jefferson Parrish*, which would have forced the Third Circuit to apply the consumer demand test to software bundling. However, *Innovation Data Processing* missed its chance to clarify the law of software bundling because of its posture. The court ultimately found for the defendant because IBM also offered the two programs separately, and the case was not appealed.<sup>52</sup> Thus, the court's language regarding separate or integrated products was at best an alternate holding and at worst dictum. If the court had not presented an alternate, infalible basis for its holding, *Innovation Data Processing* could have easily served as the impetus for clarification of tying law as applied to software bundling.

Fifteen years later, well after the consumer demand test had been established by *Jefferson Parrish*<sup>53</sup> and refined by *Image Tech*,<sup>54</sup> software bundling again surfaced on the antitrust horizon in *Caldera, Inc. v. Microsoft Corp.*<sup>55</sup> In *Caldera*, a competitor challenged Microsoft's practice

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<sup>50</sup> *Id.* at 1476.

As a general rule . . . 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 [sic] 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.*

*Id.* (emphasis added) (quoting *Foremost Pro Color, Inc. v. Eastman Kodak*, 703 F.2d 534, 542–43 (9th Cir. 1983)).

<sup>51</sup> *Innovation Data Processing, Inc.*, 585 F. Supp. 1470 (case decided on March 30, 1984); *cf.* *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2 (1984) (case decided on March 27, 1984).

<sup>52</sup> *Innovation Data Processing, Inc.*, 585 F. Supp. at 1475 (“Of course where the buyer is free to take either product by itself, there is no tying problem even though the seller may also offer the two items as a unit at a single price.” (quoting *N. Pac. Ry Co. v. United States*, 356 U.S. 1, 6 n.4 (1958))).

<sup>53</sup> See *Jefferson Parrish*, 466 U.S. at 3.

<sup>54</sup> See *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 461–62 (1992).

<sup>55</sup> *Caldera, Inc. v. Microsoft Corp.*, 72 F. Supp. 2d 1295 (D. Utah 1999). Although *A.I. Root Co. v. Computer/Dynamics, Inc.*, 806 F.2d 673, 675–77 (6th Cir. 1986), involved a software manufacturer that conditioned the sale of its OS on the purchase of other software applications, the court found for the defendant Computer/Dynamics because it did not enjoy sufficient market power in the tying good's market. Thus, the court did not submit the

of integrating the MS-DOS OS and Windows 3.1 graphical user interface (“GUI”) in what would ultimately converge to form Windows 95.<sup>56</sup> Microsoft responded by arguing that Windows 95 was an integrated product the likes of which the market had never seen,<sup>57</sup> and proposed a test for integration that would deem any software bundle which produced some advantage—but not necessarily a net advantage or positive sum gain—an integrated program.<sup>58</sup>

The district court rejected Microsoft’s proposal as contrary to the consumer demand test and thus prohibited by the binding precedent of *Jefferson Parrish* and *Image Tech*.<sup>59</sup> However, given the level of technological innovation present in the case before it, but not present in *Jefferson Parrish*, the court hesitated to second-guess Microsoft’s program architecture and to rely completely on the consumer demand test.<sup>60</sup>

In what seems a compromise between Microsoft’s proposal and the unchanged black letter of *Jefferson Parrish* and *Image Tech*., the district court created this rule: “[I]f the evidence shows that a valid, not insignificant, technological improvement has been achieved by the integration of two products, then in essence a new product has been created, and a defendant is insulated from [Sherman Act] § 1 tying liability”<sup>61</sup> because there is no tying of separate products. But the court exercised care not to stray too far from the traditional consumer demand test:

In determining whether a technological advance has essentially created a new product through integration, the two products that have been integrated must be joined for technological reasons. In other words, in the spirit of *Jefferson Parish*, this analysis requires the integration to be driven by technology rather than by marketing.<sup>62</sup>

To satisfy this test, a defendant must show more than a subjective desire to improve its product or sales; it must demonstrate objectively measurable efficiencies derived from integration.<sup>63</sup>

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bundle to any sort of efficiency analysis.

<sup>56</sup> *Caldera*, 72 F. Supp. 2d at 1304.

<sup>57</sup> *Id.* at 1320. Microsoft’s argument is now familiar, if not shopworn. It continues to argue that its technology outpaces the law, and that, therefore, the law should adapt. *See infra* Part II.C.

<sup>58</sup> *Caldera*, 72 F. Supp. 2d at 1322–23. Notably, Microsoft’s proposed rule is identical to the D.C. Circuit’s interpretation of a consent decree between the Antitrust Division of the Department of Justice and Microsoft in which Microsoft agreed not to engage in software tying. *See infra* note 61 and accompanying text.

<sup>59</sup> *Caldera*, 72 F. Supp. 2d at 1323.

<sup>60</sup> *Id.*

<sup>61</sup> *Id.* at 1325.

<sup>62</sup> *Id.* at 1326 (citing *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 21 (1984)).

<sup>63</sup> *Caldera*, 72 F. Supp. 2d at 1325 (“[A] product improvement motivation—at least

The court applied its augmented consumer demand test to conclude that Microsoft was not entitled to summary judgment regarding the issue of integrated or separate products.<sup>64</sup> Specifically, the court found that a question of fact existed with respect to whether Microsoft integrated MS DOS and Windows 3.1 for marketing or efficiency reasons.<sup>65</sup> However, *Caldera* never proceeded to trial, and the relationship between software bundling and tying law remained unclear.

The last software bundling case to surface before *Microsoft III* was the similar but unrelated *Microsoft II*.<sup>66</sup> At trial, the Department of Justice (“DOJ”) alleged a violation of a consent decree to which both parties had assented, and initiated a civil contempt proceeding against Microsoft.<sup>67</sup> The decree addressed, *inter alia*, Microsoft’s practice of bundling its Internet Explorer web browser with its ubiquitous Windows 95 OS and prohibited “Microsoft from entering into any operating system license agreement that is ‘expressly or impliedly conditioned upon the licensing of any . . . other product.’”<sup>68</sup> However, this agreement provided the caveat that it “shall not be construed to prohibit Microsoft from developing integrated products.”<sup>69</sup> The language and effect of this decree drove the ensuing litigation. The district court (and later the circuit court) had to determine “whether Internet Explorer is to be deemed as ‘integrated’ component of Windows 95, or, to the contrary, an ‘other product,’ distinct and severable from the operating system without otherwise impairing the system’s operational integrity.”<sup>70</sup>

The DOJ contended that Internet Explorer “possesses both a physical and commercial existence of its own, separate and apart from any Microsoft operating system,” and therefore was not integrated with Windows 95.<sup>71</sup> Microsoft, of course, argued that Windows 95 and Internet Explorer were

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without something more, such as demonstrated efficiencies—will not save an otherwise illegal tying arrangement under § 1.” (quoting *Multistate Legal Studies v. Harcourt Brace Jovanovich Legal & Professional Publications, Inc.*, 63 F.3d 1540, 1551 n.9 (10th Cir. 1995))).

<sup>64</sup> *Caldera*, 72 F. Supp. 2d at 1328.

<sup>65</sup> *Id.* at 1326–27. The court found instructive Microsoft employees’ statements that MS DOS and Windows 3.1 were “stuck together with baling wire and bubble gum” as a matter of marketing, and not technological necessity. *Id.* at 1326 (internal citations omitted). In fact, these two underlying programs in Windows 95 shared no code; one could function independently of the other. *Id.* at 1327.

<sup>66</sup> *United States v. Microsoft Corp.*, 980 F. Supp. 537 (D.D.C. 1997), *stay granted*, No. 97-5343, 1998 WL 236582 (D.C. Cir. May 12, 1998), *and rev’d*, 147 F.3d 935 (D.C. Cir. 1998) [hereinafter *Microsoft II*].

<sup>67</sup> *Microsoft II*, 980 F. Supp. at 539.

<sup>68</sup> *Id.* at 540 (quoting Consent Decree § IV(E)(i)).

<sup>69</sup> *Id.* at 539 n.2.

<sup>70</sup> *Id.* at 540 (quoting Consent Decree § IV(E)(i)).

<sup>71</sup> *Id.*

integrated products as contemplated by the decree.<sup>72</sup> While the district court analyzed traditional tying jurisprudence and considered *Jefferson Parrish* and *Image Tech.*,<sup>73</sup> it made clear the constraints placed on it by procedural posture.<sup>74</sup> Because the court was interpreting a consent decree in a civil contempt proceeding, it was bound by considerations that would not have applied if the court had simply been interpreting antitrust law. Although the court found that Microsoft offered a plausible interpretation of the consent decree, it also found the DOJ's interpretation convincing.<sup>75</sup> The court resolved the disputed interpretation of the consent decree by concluding that the DOJ had not carried its evidentiary burden in the contempt proceeding.<sup>76</sup> It was, however, willing to preliminarily enjoin Microsoft from continuing to bundle Internet Explorer and Windows.<sup>77</sup>

On appeal, the circuit court reached a different result. The court overturned the preliminary injunction which prohibited Microsoft from continuing to bundle Windows and Internet Explorer.<sup>78</sup> Then, the circuit court undertook to interpret a portion of the consent decree to determine whether Microsoft had expressly or impliedly conditioned license of Windows 95 on license of Internet Explorer.<sup>79</sup> Thus, it had to decide whether Windows and Internet Explorer were separate or integrated products.

In its separate or integrated products inquiry, the circuit court looked first and foremost within the four corners of the consent decree and the

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<sup>72</sup> *Id.*

<sup>73</sup> *Microsoft II*, 980 F. Supp. at 542–43.

<sup>74</sup> *See id.* at 541. In discussing procedural constraints, the district court stated:

The Court must resolve any ambiguities in the terms of the Final Judgment in favor of Microsoft, the party charged with contempt. Microsoft offers a plausible interpretation of what it considers to be an “integrated product” as the term is used in § IV(E)(i): a product that “combines” or “unites” functions that, although capable of functioning independently, undoubtedly complement one another. Windows 95 and Internet Explorer enjoy such a synergy, Microsoft argues.

As Microsoft correctly observes, placing reliance on amorphous considerations, requiring the balancing of multiple factors to ascertain whether a party subject to a judicial order is in violation of its terms, is inconsistent with the requirement that a judicial order provide “explicit notice of precisely what conduct is outlawed.

*Id.*

<sup>75</sup> *Id.* at 541–42.

<sup>76</sup> *Id.* at 541.

<sup>77</sup> *Id.* at 546.

<sup>78</sup> *Microsoft II*, 147 F.3d 935, 943 (D.C. Cir. 1998) (“Microsoft argues that the district court failed to comply with Federal Rule of Civil Procedure 65(a)(1)’s command, ‘No preliminary injunction shall be issued without notice to the adverse party.’ We agree.”).

<sup>79</sup> *Id.* at 946.

circumstances surrounding the decree's formation. The court first established a point of reference: It interpreted the decree to contemplate the Windows 3.11 GUI and the MS-DOS OS as separate products, but deem the component GUI and OS in Windows 95 as integrated products.<sup>80</sup> Thus, if the court found that the Windows 95/Internet Explorer bundle was more like the combination of the Windows 3.11 GUI and MS-DOS OS, it would deem Windows 95 and Internet Explorer separate products capable of violating the decree.<sup>81</sup> Conversely, if it decided that Windows 95 and Internet Explorer more closely resembled the component GUI and OS in Windows 95 itself, then the court would label Windows 95 and Internet Explorer integrated products which, if combined, would not violate the decree.<sup>82</sup>

The court did not use antitrust law to distinguish between the impermissible bundle of the Windows 3.11 GUI and MS-DOS OS and the permissible bundle of the component parts of Windows 95. Instead, it made this distinction based upon Microsoft's and the DOJ's objectively manifested intent. Thus, the court founded its entire analysis on contract interpretation and not antitrust law.<sup>83</sup>

However, the D.C. Circuit did address the law which would have controlled its inquiry had it not been interpreting a consent decree. The court first took the liberty of questioning the consumer demand test's effectiveness in the situation before it.<sup>84</sup> Second, the court defined the term "integration" under the consent decree as "any genuine technological integration, regardless of whether elements of the integrated package are

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<sup>80</sup> *Id.*

<sup>81</sup> *Id.*

<sup>82</sup> *Id.* The court reasoned that:

Whatever else § IV(E)(i) [of the consent decree] does, it must forbid a tie-in between Windows 3.11 and MS-DOS, and it must permit Windows 95. Thus if the relation between Windows 95 and Internet Explorer is similar to the relation between Windows 3.11 and MS-DOS, the link is presumably barred by § IV(E)(i). On the other hand, a counter-analogy is Windows 95 itself, which the decree explicitly recognizes as a single "product" (it defines it as a "Covered Product," § II(1)(v)), even though, as we have said, Windows 95 combines the functionalities of a graphical interface and an operating system. If the Windows 95/[Internet Explorer] combination is like the MS-DOS/graphical interface combination that comprises Windows 95 itself, then it must be permissible.

*Id.*

<sup>83</sup> *Id.* (citations omitted). ("The court's task, then, is to discern the bargain that the parties struck; this is the sense behind the proposition that consent decrees are to be interpreted as contracts.")

<sup>84</sup> *Microsoft II*, 147 F.3d at 947-48.

marketed separately.”<sup>85</sup>

The court’s definition of integration has two requirements. First, the combination must “be different from what the purchaser could create from the separate products on his own;”<sup>86</sup> it must be an example of a “physical or technological interlinkage that the customer cannot perform.”<sup>87</sup> The court found that the Windows 95/Internet Explorer combination fulfilled this requirement. This combination was technologically interlinked because Internet Explorer code was interwoven with the Windows 95 OS code.<sup>88</sup>

Second, the combination must be value-adding and create some advantage as compared to the two pre-integrated products.<sup>89</sup> Likewise, the court found the Windows 95/Internet Explorer combination to add value. The court referred to the combination as an upgrade, whereby Windows OS gained “browser functionality.”<sup>90</sup> Finally, the circuit court held that Windows 95 and Internet Explorer more closely resembled the component GUI and OS in Windows 95.<sup>91</sup> Therefore, it was “inclined to conclude that the Windows 95/Internet Explorer package is a genuine integration; consequently, [the consent decree] does not bar Microsoft from offering it as one product.”<sup>92</sup>

The court’s integrated products definition disregarded whether consumer demand for the component products exists and technically contradicts the consumer demand test of *Jefferson Parrish* and *Image Tech*. Nonetheless, the court attempted to square its holding with tying law.<sup>93</sup> In effect, the court explained that the consumer demand test for the existence of a tying arrangement was ill-suited to examine technological innovation and that the Supreme Court would not apply the test to such technologically

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<sup>85</sup> *Id.* at 948.

<sup>86</sup> *Id.* at 949.

<sup>87</sup> *Id.* (quoting 10 AREEDA & HOVENKAMP, *supra* note 18, ¶ 1746b, at 227–28).

<sup>88</sup> *Id.* at 952.

<sup>89</sup> *See id.* at 949. The appellate court stated:

Manufacturers can stick products together in ways that purchasers cannot without the link serving any purpose but an anticompetitive one. The concept of integration should exclude a case where the manufacturer has done nothing more than to metaphorically “bolt” two products together, as would be true if Windows 95 were artificially rigged to crash if IEXPLORE.EXE were deleted.

*Id.* at 949.

<sup>90</sup> *Microsoft II*, 147 F.3d at 952.

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> The court’s foray into tying law is rank dicta. Recall the court was interpreting a consent decree—a contract between Plaintiff and Defendant—and was not faced with the question of whether Microsoft’s conduct violated tying law.



innovative integration.<sup>94</sup> Therefore, the court implied, it was free to craft its own separate products test for technologically innovative products—or at least software bundling. However, the D.C. Circuit's new test was precedentially limited and easily distinguishable. As indicated above, the court was not applying antitrust law and *Jefferson Parrish* and *Image Tech.* did not govern; it was simply interpreting a contract.

### *C. The State of Software Tying Law Before Microsoft III*

A review of the tying jurisprudence of software bundling does not produce a clear rule but does glean an apparent trend.<sup>95</sup> What is clear is that courts hesitate in applying the now traditional consumer demand test to technologically innovative software bundling.<sup>96</sup> Instead, they are willing to supplement or modify the traditional consumer demand test to accommodate technological innovation.

In *Caldera*, the District of Utah modified the consumer demand test to allow innovative software bundling that was motivated by technological and not marketing considerations and which produced an objectively measurable efficiency gain.<sup>97</sup> But the court did not ignore consumer demand and did not shun *Jefferson Parrish* and *Image Tech.* The district court's test was groundbreaking in that it apparently anticipates consumer demand: programs validly and significantly improved by integration—thereby satisfying the court's criterion for integrated products—could displace consumer demand for non-integrated programs and satisfy the consumer demand test with minimal accommodation for new technology.

Similarly, in *Microsoft II*, the D.C. Circuit focused on the type and effect of the bundle. If the software bundle was truly innovative (i.e., was not simply a bolt-on of two separate products and was value-adding), then it was an integrated product, notwithstanding consumer demand.<sup>98</sup> The circuit court attempted to square its decision with the consumer demand test by

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<sup>94</sup> See *Microsoft II*, 147 F.3d at 950. The D.C. Circuit Court of Appeals opined:

We believe this [definition of integrated products] is consistent with tying law. The Court in . . . *Image Tech.* . . . , for example, found parts and service separate products because sufficient consumer demand existed to make separate provision efficient. But we doubt that it would have subjected a self-repairing copier to the same analysis; i.e., the separate markets for parts and service would not suggest that such an innovation was really a tie-in.

*Id.*

<sup>95</sup> See *supra* Part II.B.

<sup>96</sup> See *Microsoft II*, 147 F.3d at 947–48; *Caldera, Inc. v. Microsoft Corp.*, 72 F. Supp. 2d 1295, 1323 (D. Utah 1999).

<sup>97</sup> *Caldera*, 72 F. Supp. 2d at 1326.

<sup>98</sup> *Microsoft II*, 147 F.3d at 949.

arguing that *Jefferson Parrish* and *Image Tech.* were not controlling in innovative combinations.<sup>99</sup> However, like the district court in *Caldera*, the circuit court's new test was more akin to a modification of the consumer demand test than a new test altogether: The test merely sought to anticipate consumer demand for the innovative bundle.

The district court's test in *Caldera*, and the circuit court's test in *Microsoft II*—whether knowingly or unknowingly—provide an answer to one of Microsoft's strongest arguments used over the course of its antitrust litigation. Microsoft has argued broadly that the consumer demand test fails when applied to new technology.<sup>100</sup> A truly innovative product, it has contended, creates its own demand *ab initio*.<sup>101</sup> This soon-to-be-created demand for the integrated product will displace the demand for the tied product and would, therefore, satisfy the consumer demand test at some point in the future.

But future demand is not cognizable under the *Jefferson Parrish* consumer demand test, which is backward-looking. The test focuses on demand for the tied product at the time the plaintiff first introduces its bundled products and looks at the condition of the market before the plaintiff's bundle affects consumer demand.<sup>102</sup> Thus, a truly innovative product—one that displaces demand for current competing products—will never pass the *Jefferson Parrish-Image Tech.* version of the consumer demand test and will always be considered a combination of two separate products. The rules in *Caldera* and *Microsoft II* solve this catch-22 by anticipating future demand. If this newly created demand will be strong enough to displace demand for the tied product—that is, if the combination of products is a “valid, not insignificant, technological improvement”<sup>103</sup> which will render the tied product obsolete to consumers—then the combination would fulfill the consumer demand test, even though it does not do so now.

### III. MICROSOFT III

In 2001, just three years after addressing *Microsoft II*, the D.C. Circuit again faced the legality of Microsoft's Windows/Internet Explorer bundle in *Microsoft III*.<sup>104</sup> This time around, however, the court was charged with

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<sup>99</sup> *Id.* at 950.

<sup>100</sup> *See Microsoft III*, 253 F.3d at 87–89.

<sup>101</sup> *See id.*

<sup>102</sup> *See Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 21–22 (1984); *Microsoft III*, 253 F.3d at 89; 10 AREEDA & HOVENKAMP, *supra* note 18, ¶ 1746, at 224–29.

<sup>103</sup> *Caldera, Inc. v. Microsoft Corp.*, 72 F. Supp. 2d 1295, 1325 (D. Utah 1999).

<sup>104</sup> *Microsoft III*, 253 F.3d at 47. The court aptly summarized the case's tortured procedural history, stating:

In July 1994, officials at the Department of Justice (“DOJ”), on behalf of the

interpreting antitrust law instead of a consent decree.<sup>105</sup> Again, the plaintiffs alleged per se tying liability, while Microsoft countered with an integrated products argument.<sup>106</sup>

At trial, the district court applied the traditional *Jefferson Parrish-Image Tech.* consumer demand test to find that Internet Explorer is a product separate from both the Windows 95 and 98 OSs.<sup>107</sup> The court dismissed the fact that Internet Explorer code was commingled with Windows.<sup>108</sup> It focused on “commercial reality” instead of “what might appear to be reasonable” to conclude that “consumers today perceive operating systems and browsers as separate ‘products,’ for which there is separate demand.”<sup>109</sup> Thus, the district court held Microsoft liable for tying under *Jefferson Parrish* and *Image Tech.*<sup>110</sup>

On appeal, the circuit court questioned the district court’s strict application of the consumer demand test to Internet Explorer and the Windows 95 and 98 OSs.<sup>111</sup> The court’s primary concern was whether the test could adequately determine if such technologically advanced products are integrated or separate.<sup>112</sup> The court began by exploring the rationale behind the consumer demand test, which, it reasoned, “is a rough proxy for

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United States, filed suit against Microsoft, charging the company with, among other things, unlawfully maintaining a monopoly in the operating system market through anticompetitive terms in its licensing and software developer agreements. The parties subsequently entered into a consent decree, thus avoiding a trial on the merits. *See* *United States v. Microsoft Corp.*, 56 F.3d 1448 (D.C. Cir. 1995) (“*Microsoft I*”). Three years later, the Justice Department filed a civil contempt action against Microsoft for allegedly violating one of the decree’s provisions. On appeal from a grant of a preliminary injunction, this court held that Microsoft’s technological bundling of Internet Explorer 3.0 and 4.0 with Windows 95 did not violate the relevant provision of the consent decree. *United States v. Microsoft Corp.*, 147 F.3d 935 (D.C. Cir. 1998) (“*Microsoft II*”). We expressly reserved the question whether such bundling might independently violate §§ 1 or 2 of the Sherman Act.

On May 18, 1998, shortly before issuance of the *Microsoft II* decision, the United States and a group of State plaintiffs filed separate (and soon thereafter consolidated) complaints, asserting antitrust violations by Microsoft and seeking preliminary and permanent injunctions against the company’s allegedly unlawful conduct.

*Id.*

<sup>105</sup> *See id.*

<sup>106</sup> *Id.* at 85.

<sup>107</sup> *Microsoft III*, 87 F. Supp. 2d 30, 48–51 (D.D.C. 2000).

<sup>108</sup> *Id.* at 49.

<sup>109</sup> *Id.*

<sup>110</sup> *Id.*

<sup>111</sup> *See id.* at 48–51.

<sup>112</sup> *Microsoft III*, 253 F.3d at 87–88.

whether a tying arrangement may, on balance, be welfare-enhancing, and unsuited to per se condemnation.”<sup>113</sup> “In other words,” the court reasoned, “perceptible separate demand is inversely proportional to [welfare-enhancing] net efficiencies.”<sup>114</sup> The court cautioned that *Jefferson Parrish* promulgated the consumer demand test to displace these time-consuming considerations of welfare enhancement and network efficiencies.<sup>115</sup> Nonetheless, it reviewed the district court’s separate products decision in light of these considerations.

By delving into the economic considerations for which the consumer demand test serves as proxy, the court began its review with the premise that “the separate-products element of the per se rule may not give newly integrated products a fair shake.”<sup>116</sup> Chief among the court’s concerns was the notion that the consumer demand test is backward-looking and cannot appreciate demand-displacing technological innovation.<sup>117</sup>

More specifically, the court doubted that the Supreme Court intended the consumer demand test to apply to software bundling because of the “undue risks of error and of deterring welfare-enhancing innovation.”<sup>118</sup>

With this perspective the court looked to earlier tying cases for guidance. The court did not find helpful any of the software tying cases available.<sup>119</sup> The court brushed aside *Caldera* and distinguished its prior holding in *Microsoft II* as merely an interpretation of a consent decree, not antitrust law.<sup>120</sup> Thus, the circuit court found itself in uncharted waters. It reasoned that neither its own decisions nor the decisions of lower or higher courts addressed the issue before it.

After allaying concerns of stare decisis, the court crafted the economic foundation of a new mode of analysis for tying charges in software bundling.<sup>121</sup> First, the court reiterated the problem with the backward-looking consumer demand test and innovative products.<sup>122</sup> Second, the

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<sup>113</sup> *Id.* at 87.

<sup>114</sup> *Id.* at 87–88.

<sup>115</sup> *Id.* at 88.

<sup>116</sup> *Id.* at 89.

<sup>117</sup> *Id.*; see *supra* Part II.C.

<sup>118</sup> *Microsoft III*, 253 F.3d at 89–90.

<sup>119</sup> *Id.* at 90. For a list of these cases, see *supra* Part II.B.

<sup>120</sup> *Microsoft III*, 253 F.3d at 92 (“While we believed our interpretation of the term ‘integrated product’ was consistent with the test for separate products under tying law, we made clear that the ‘antitrust question is of course distinct.’” (quoting *Microsoft II*, 147 F.3d at 950 n.14, and citing *Caldera, Inc. v. Microsoft Corp.*, 72 F. Supp. 2d 1295 (D. Utah 1999))).

<sup>121</sup> *Id.* (noting that “[w]hile the paucity of cases examining software bundling suggests a high risk that per se analysis may produce inaccurate results, the nature of the platform software market affirmatively suggests that per se rules might stunt valuable innovation.”).

<sup>122</sup> *Id.* at 92–93.

court reasoned that software bundling must create efficiencies because even firms without market power—which cannot coerce consumers into purchasing a tied product—bundle software.<sup>123</sup> Although the court recited several possible bundling efficiencies, it was more concerned with the efficiencies it could not anticipate.<sup>124</sup> To allow for unanticipated efficiency arguments, the court announced that, without regard to the “single product” defense, tying charges stemming from software bundling would no longer be subject to a per se analysis.<sup>125</sup> Now, the court held, software bundling is to be analyzed under a more flexible rule of reason.<sup>126</sup>

Generally, the rule of reason proscribes unnecessary, purposeful, or overpowerful restraints on competition.<sup>127</sup> The rule is context-specific and fact-intensive; it provides little bright-line predictability. Unfortunately, the circuit court provided little guidance for distinguishing reasonable from unreasonable software bundles. It merely instructed trial courts to focus on the effect of the bundle and balance its economic efficiencies against its competitive restraints.<sup>128</sup>

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<sup>123</sup> *Id.* at 93 (“Firms without market power have no incentive to package different pieces of software together unless there are efficiency gains from doing so. The ubiquity of bundling in competitive platform software markets should give courts reason to pause before condemning such behavior in less competitive markets.”).

<sup>124</sup> *Id.* at 93–95.

<sup>125</sup> *Id.* at 95.

<sup>126</sup> In *Microsoft III*, the circuit court attempted to limit this rule to the facts before it:

Our judgment regarding the comparative merits of the per se rule and the rule of reason is confined to the tying arrangement before us, where the tying product is software whose major purpose is to serve as a platform for third-party applications and the tied product is complementary software functionality. While our reasoning may at times appear to have broader force, we do not have the confidence to speak to facts outside the record, which contains scant discussion of software integration generally.

*Microsoft III*, 253 F.3d at 95. Although a new tying rule for OS/application bundles is monumental in itself, the court’s language suggests wider applicability. The court’s broad language and sweeping economic policy analysis can easily be adapted to analogous fact patterns.

<sup>127</sup> See *Standard Oil Co. of N.J. v. United States*, 337 U.S. 293 (1911) (prohibiting, under the rule of reason, restraints which are undue as measured by anti-competitive effect); *Addyston Pipe & Steel Co. v. United States*, 175 U.S. 211 (1899) (holding that the rule of reason prohibits naked restraints while allowing ancillary restraints).

<sup>128</sup> *Microsoft III*, 253 F.3d at 95.

#### IV. THE LAW OF TYING IN THE EUROPEAN UNION

##### A. Source of Law: A Brief Overview

The Treaty of Rome is the wellspring of E.C. competition law.<sup>129</sup> Article 81, analog of section 1 of the Sherman Act,<sup>130</sup> prohibits “all agreements between undertakings [(business entities)], decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market . . . .”<sup>131</sup> More specifically, Article 81 prohibits anticompetitive agreements or measures “which make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.”<sup>132</sup> In other words, Article 81 prohibits tying.

Article 82 corresponds to section 2 of the Sherman Act,<sup>133</sup> and forbids undertakings from abusing a dominant (i.e., monopolistic) position.<sup>134</sup> Like Article 81, Article 82 also prohibits tying. Specifically, Article 82 disallows an undertaking from “making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.”<sup>135</sup> Thus, while Article 81 prohibits anticompetitive tying regardless of the undertaking’s market power,<sup>136</sup> Article 82 prohibits tying by an undertaking in a dominant position regardless of actual anticompetitive effect.<sup>137</sup>

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<sup>129</sup> Treaty Establishing the European Economic Community, Mar. 25, 1957, 298 U.N.T.S. 11, as renumbered by Treaty on European Union, Feb. 7, 1992, O.J. (C224/79), 31 I.L.M. 247 (entered into force Nov. 1, 1993) [hereinafter Maastricht Treaty].

<sup>130</sup> 15 U.S.C. § 1 (2000) (prohibiting agreements in restraint of trade).

<sup>131</sup> Maastricht Treaty, *supra* note 129, art. 81(1).

<sup>132</sup> *Id.* art. 81(1)(e).

<sup>133</sup> 15 U.S.C. § 2 (2000) (requiring, for a violation, monopoly power and prohibited conduct or abuse). For a determination of monopoly power, see *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451 (1992). For a discussion of prohibited conduct by a monopolist, see *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985).

<sup>134</sup> Maastricht Treaty, *supra* note 129, art. 82. For a determination of market power sufficient to constitute a dominant position, see *Case 85/76, Hoffman-La Roche v. Commission*, [1979] E.C.R. 461. For a discussion of abusive conduct, see *Case COMP/C-3/37.792, Microsoft Corp. v. Commission*, (unreported, Mar. 24, 2004) (CEC), available at <http://europa.eu.int/comm/competition/antitrust/cases/decisions/37792/en.pdf>.

<sup>135</sup> Maastricht Treaty, *supra* note 129, art. 82(d).

<sup>136</sup> *Id.* art. 81(1)(e).

<sup>137</sup> *Id.* art. 82(d).

### B. Procedure and Extraterritorial Jurisdiction

The E.C., headed by the Directorate-General for Competition, has authority to investigate and prosecute competition cases.<sup>138</sup> Unlike U.S. antitrust law, E.C. competition law does not grant individual citizens standing to sue. Only the E.C. may prosecute a competition complaint. Nonetheless, private parties play an influential role in E.C. competition litigation by acting as *amici curiae*.<sup>139</sup> In fact, almost anyone can file a complaint to be pursued by the E.C.<sup>140</sup> Upon receipt of this complaint, the E.C. sends the targeted undertaking a formal discovery request, to which it has four weeks to respond.<sup>141</sup> The E.C. then analyzes the undertaking's response. It may decide to decline prosecution or it may issue a formal Statement of Objections.<sup>142</sup> If the E.C. opts to prosecute, the undertaking has two months to produce a written defense, which is analogous to an appellate brief.<sup>143</sup> The targeted undertaking will then appear in front of the E.C. for a formal hearing which resembles appellate oral argument in the United States.<sup>144</sup> The E.C. takes the matter under advisement, and may order monetary or injunctive relief.<sup>145</sup> This order is appealable to the Court of First Instance ("C.F.I.") in Luxembourg, and finally to the European Court of Justice ("E.C.J.").

The E.C. enjoys jurisdiction over many non-E.U. undertakings. In fact, the E.C. may impose its ruling on a corporation that has no offices within the European Union provided that the corporation conducts business in the European Union and that business produces an appreciable effect prohibited by E.C. competition laws.<sup>146</sup>

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<sup>138</sup> See, e.g., Europa Website, [http://europa.eu.int/comm/competition/index\\_en.html](http://europa.eu.int/comm/competition/index_en.html) (last visited Dec. 13, 2004).

<sup>139</sup> See Dawn Kawamoto & Matt Hines, *Microsoft to Pay Novell US\$536 million settlement*, CNET NEWS.COM, Nov. 9, 2004, <http://asia.cnet.com/news/software/0,39037051,39200403,00.htm> (last visited Feb. 14, 2005). In a recent settlement of U.S. antitrust litigation, Microsoft paid Novell \$536 million. Included in that settlement was an agreement by Novell not to pursue E.C. enforcement. Novell's ability to influence the proceedings must have been substantial to warrant a portion of such a sum.

<sup>140</sup> Barbara Crutchfield George et al., *Increasing Extraterritorial Intrusion of European Union Authority into U.S. Business Mergers and Competition Practices: U.S. Multinational Businesses Underestimate the Strength of the European Commission from G.E.-Honeywell to Microsoft*, 19 CONN. J. INT'L L. 571, 589 (2004) ("E.C. procedures allow competitors, Member States, or individuals to file complaints with the Commission alleging abuse of a dominant market position.").

<sup>141</sup> *Id.*

<sup>142</sup> *Id.*

<sup>143</sup> *See id.*

<sup>144</sup> *See id.*

<sup>145</sup> *Id.*

<sup>146</sup> See Case 89/85, *Wood Pulp Case*, 1988 E.C.R. 5193; Yeo Jin Chun, *The GE-Honeywell Merger Debacle: The Enforcement of Antitrust/Competition Laws Across the*

In a 2002 article, Yeo Jin Chun discussed the European Union's position on extraterritorial jurisdiction in competition law, stating:

European law requires that there be a prohibited effect, but whereas American common law requires intent, the European Court of Justice requires none. 'The decisive factor' in deciding whether there was a violation of common market competition law is where the agreement, decision or concerted practice was 'implemented.' Also, the European Court of Justice will find violations of Articles 81 and 82 if the conduct has prohibited effects on the common market, direct or indirect, actual or potential. The European Court of Justice also does not require substantial effects but rather appreciable effects. An appreciable standard is a lower threshold test than a substantial standard.<sup>147</sup>

Thus, the threshold for extraterritorial jurisdiction in E.C. competition litigation is extraordinarily low, even when compared with the far-reaching Sherman Act. E.U. competition law can easily include U.S. firms engaged in multinational commerce and surely includes Microsoft Corporation.

## V. MICROSOFT VERSUS COMMISSION

In its 302 page opinion resolving the challenge against Microsoft, the E.C. scrutinized Microsoft's business practices in relation to competition law.<sup>148</sup> Microsoft's practices included bundling Windows Media Player and Windows OS. The E.C. examined the Windows OS/Windows Media Player bundle under Article 82(d) to determine whether Microsoft was guilty of tying.<sup>149</sup> The E.C. first detailed the four elements of an Article 82(d) tying offense:

Tying prohibited under Article 82 of the Treaty requires the presence of the following elements: (i) the tying and tied goods are two separate products; (ii) the undertaking concerned is dominant in the tying product market; (iii) the undertaking concerned does not give customers a choice to obtain the tying product without the tied product; and (iv) tying forecloses competition.<sup>150</sup>

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*Atlantic Pond*, 15 N.Y. INT'L L. REV. 61, 75–76 (2002); David J. Feeney, *The European Commission's Extraterritorial Jurisdiction Over Corporate Mergers*, 19 GA. ST. U. L. REV. 425, 440–41 (2002).

<sup>147</sup> See *id.* at 75–76 (footnotes omitted).

<sup>148</sup> See Case COMP/C-3/37.792, *Microsoft Corp. v. Comm'n*, (unreported, Mar. 24, 2004) (CEC), available at <http://europa.eu.int/comm/competition/antitrust/cases/decisions/37792/en.pdf>.

<sup>149</sup> *Id.*

<sup>150</sup> *Id.* ¶ 794.



According to the E.C., Microsoft's Windows OS-Windows Media Player bundle easily satisfied some of the elements described above.

The E.C. wasted little time determining that Microsoft enjoyed dominance in the tying product's market.<sup>151</sup> It defined the market for the tying product—Windows OS—by measuring cross-elasticity of demand. The E.C. refused to consider non-Intel personal computer ("PC") operating systems as part of the Windows OS market since these operating systems did not "alter the result of the assessment of Microsoft's market power."<sup>152</sup> Thus, the E.C. disregarded Macintosh OS. To augment its demand analysis, the E.C. also examined cross-elasticity of supply within the market for Windows OS. It considered entry barriers to potential competitors and concluded that the research, design, marketing, and hardware-software interface aspects of the Intel PC OS market serve to exclude potential entrants.<sup>153</sup> The E.C. concluded that significant entry barriers protected established firms within the relevant market for Windows OS—which the E.C. limited to only Intel PC OSs.<sup>154</sup> Windows enjoyed a dominant position within that market, the E.C. concluded.<sup>155</sup> The E.C. also summarily determined that Microsoft "does not give customers a choice to obtain the tying product without the tied product" because Microsoft did not offer Windows OS without Windows Media Player.<sup>156</sup>

Moreover, the E.C. had little trouble finding that Microsoft's tying of Windows Media Player to Windows OS forecloses competition in the market for media players, and stated:

The Court of Justice has stated that it constitutes an abuse when an undertaking in a dominant position directly or indirectly ties its customer by a supply obligation since this deprives the customer of the ability to choose freely his sources of supply and denies other producers access to the market.<sup>157</sup>

Microsoft offered procompetitive justifications, reminded the E.C. that its installation agreements allowed hardware manufacturers to uninstall Windows Media Player, and pointed to the popular practice of downloading competing media players such as Nullsoft's Winamp.<sup>158</sup> However, the E.C. rejected Microsoft's justifications: it held that the sheer prevalence of Windows OS and Windows Media Player precluded the E.C. from

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<sup>151</sup> See *id.* ¶¶ 321–22.

<sup>152</sup> *Id.* ¶ 326.

<sup>153</sup> See *id.* ¶ 334–41.

<sup>154</sup> Case COMP/C-3/37.792, *Microsoft Corp.*, ¶¶ 334–41.

<sup>155</sup> *Id.*

<sup>156</sup> *Id.* ¶ 794. See *id.* ¶¶ 796–98.

<sup>157</sup> *Id.* ¶ 835 (citing Case 85/76, *Hoffmann-La Roche v. Commission*, 1979 E.C.R. 461).

<sup>158</sup> *Id.* ¶¶ 849–71.

entertaining procompetitive justifications.<sup>159</sup>

Unlike elements (ii), (iii), and (iv) above,<sup>160</sup> the E.C. examined closely the separate products inquiry.<sup>161</sup> Microsoft argued that Windows Media Player and Windows OS should not be considered separate products because of existing consumer perception. In the minds of consumers, Microsoft argued, PCs should be—and are—capable of displaying multimedia without additional programs.<sup>162</sup> However, the E.C. rejected this argument. It held that consumers view media players as distinct from operating systems as evidenced by aftermarket, stand-alone media players such as Winamp and Real Player.<sup>163</sup> The E.C. did not, however, cite empirical evidence on consumer perception. Thus, the E.C. heeded neither Microsoft's consumer perception argument, nor its economic efficiency argument, nor its more general procompetitive justification argument.

The E.C.'s decision regarding the separability of Windows OS and Windows Media Player drew much commentary. Some argue that the E.C. ignored the commercial usage exception to Article 82(d).<sup>164</sup> The commercial usage exception states that “[i]f there exists a demand for the combination of the tying and tied products, [(i.e., consumer expectation)] and combining the tying and tied goods has become commercial usage [(i.e., custom)], then the E.C. will not pursue a tying charge.”<sup>165</sup> Thus, selling shoes with shoelaces is not tying in violation of Article 82(d), because consumers expect their shoes to come complete with laces, and shoe sellers customarily include laces with their shoes.<sup>166</sup>

These commentators advance a compelling argument that Windows Media Player and Windows OS are not separable:<sup>167</sup> removing media-

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<sup>159</sup> See *id.* ¶ 843.

<sup>160</sup> See *supra* text accompanying note 150.

<sup>161</sup> Case COMP/C-3/37.792, *Microsoft Corp.*, ¶ 800 (“The existence of distinct products is [a] precondition for tying. Products that are not distinct cannot be tied in a way that is contrary to Article 82.”).

<sup>162</sup> *Id.* ¶ 400.

<sup>163</sup> *Id.* Moreover, in rejecting Microsoft's argument, the Commission pointed out that “consumers value finding a word processor already installed on their computer (and OEMs often ship their client PCs with such a programme preinstalled). To the Commission's knowledge, Microsoft has however not contested that word processors and operating systems belong to separate relevant product markets.” *Id.* ¶ 405 (citations omitted).

<sup>164</sup> See, e.g., Gregory S. McCurdy, *The European Commission's Media Player Remedy in its Microsoft Decision: Compulsory Code Removal Despite The Absence Of Tying or Foreclosure*, EUROPEAN COMPETITION L.R. 25(11), 694–707 (2004).

<sup>165</sup> *Id.* at 698.

<sup>166</sup> *Id.*

<sup>167</sup> See *id.* Professor McCurdy argues that operating systems and media players are unlike cameras and film, razors and razor blades, guns and ammunition, and cars and gasoline in that media players are neither physically distinct to nor useful without operating systems. He likens Microsoft's practice of including Windows Media Player with Windows

reading code from an OS, they argue, will compromise the OS's functionality.<sup>168</sup> Consumers have come to expect this functionality and will be disappointed to find their new computer unable to play any media, even a compact disc, without adding aftermarket software.<sup>169</sup> Moreover, decoupling Windows Media Player from Windows OS will encourage other media players to continue free-riding on the continued success and popularity of Windows OS.<sup>170</sup> Thus, some observers conclude that Windows Media Player and Windows OS are not separate products which can be tied in violation of Article 82(d).

However, the E.C. did not find the commercial usage exception persuasive. After dispatching Microsoft's separate products argument, the E.C. found Microsoft in violation of Article 82(d).<sup>171</sup> As a remedy, the E.C. ordered Microsoft to provide versions of Windows without Windows Media Player within ninety days of the ruling, and levied an unprecedented fine of €497 million.<sup>172</sup>

## VI. ANALYSIS

Commentators focusing on the macro aspects of these antitrust decisions attribute the different outcomes of the Microsoft tying issues in the United States and European Union to an essential difference in the policies underlying the two jurisdictions' antitrust laws.<sup>173</sup> U.S. Antitrust law is consumer oriented; it is not concerned with either individual competitors or overall market structure. In short, "[i]t is competition, not competitors, which the [Sherman] Act protects."<sup>174</sup> By contrast, E.U. competition law is more prescriptive in nature and is designed to foster a specific market ideal.<sup>175</sup> E.U. competition law was designed "to promote throughout the Community a harmonious, balanced and sustainable development of economic activities, a high level of employment and of

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OS to a manufacturer who sells clock-radios, but does not offer a clock without the radio functionality. He argues that even though separate markets exist for clocks and radios, the clock and radio functions of a clock-radio cannot be separated without impairing the clock-radio's functionality.

<sup>168</sup> *Id.*

<sup>169</sup> *Id.*

<sup>170</sup> McCurdy, *supra* note 164, at 694.

<sup>171</sup> Case COMP/C-3/37.792, *Microsoft Corp. v. Commission*, (unreported, March 24, 2004) (CEC), art. 6(a), available at <http://europa.eu.int/comm/competition/antitrust/cases/decisions/37792/en.pdf>.

<sup>172</sup> *Id.* art. 3.

<sup>173</sup> See, e.g., Chun, *supra* note 146, at 64–65; Amanda Cohen, Note, *Surveying the Microsoft Antitrust Universe*, 19 BERKELEY TECH. L.J. 333, 354 (2004).

<sup>174</sup> See *Brown Shoe Co. v. United States*, 370 U.S. 294, 344 (1962); Chun, *supra* note 146, at 64–65; Cohen, *supra* note 173, at 354.

<sup>175</sup> See Chun, *supra* note 146, at 64–65; Cohen, *supra* note 173, at 354.

social protection, equality between men and women . . . economic and social cohesion and solidarity among Member States.”<sup>176</sup> Thus, the focus is on common market structure and harmony between member states with the recognition of numerous stockholders in antitrust outcomes. With such differing foci, it is not surprising that U.S. and E.U. antitrust law produced such disparate results when applied to very similar software bundling practices.

But the analysis of the global status of tying law as applied to software bundling cannot stop here. To say that U.S. and E.U. antitrust jurisprudence differ fundamentally, end of story, does little to help software manufacturers innovating in a global market or software consumers seeking to maximize their hardware. To truly evaluate the state of global software tying jurisprudence, one must look to the costs and benefits of bundling. Only then will the attendant costs and benefits of laws which constrain bundling become apparent.

#### A. The Economic Calculus of Software Bundling

Like most areas of antitrust, tying law seeks to maximize consumer welfare by striking a balance between competition and efficiency. Where exactly this balance lies depends as much on political orientation as economic analysis. The degree of emphasis of software bundling’s various effects on the market is contested; subjectively, this depends on the reader’s politicoeconomic leanings. Moreover, little empirical evidence of exactly how software bundling impacts the market exists. Therefore, an economic analysis of bundling is necessarily couched in general terms.<sup>177</sup>

First, software markets are often touted as economies of scope.<sup>178</sup> An economy of scope is a situation in which one firm can produce products A and B as integrated products more efficiently than if it produced A and B separately. Software manufacturers realize these efficiencies when they combine portions of two or more pieces of software: the shared portion does double duty; it reduces the overall lines of code, simplifies the programs, and saves programming time and effort. However, the malleable quality of code may minimize this efficiency argument. The cost to replicate the shared portions of code—which represents a portion of the opportunity cost savings of bundling—may be very low in some instances. In the most clear-cut example a programmer would need only to slavishly duplicate the shared portion in order to unbundle the previously integrated program—an option that imposes little or no cost to the manufacturer. Perhaps this helps to explain why courts have not been universally receptive

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<sup>176</sup> Maastricht Treaty, *supra* note 129, art. 2.

<sup>177</sup> For a more complete analysis of the efficiency implications of software bundling, *see* Sidak, *supra* note 22, at 6–19.

<sup>178</sup> *See id.* at 30.

to this argument.<sup>179</sup>

Second, the software industry exhibits substantial network effects.<sup>180</sup> Generally, network effects occur when units of a product interact with each other and this interaction is essential or important to the product's functionality. Network effects in the software industry stem primarily from compatibility issues. For example, because Windows is the most popular OS, and programs which operate within Windows are not usually compatible with other OSs, Windows has network effects on the OS market. But OSs are not the only type of software that experience network effects. The dubious interoperability of the Microsoft Word and Corel WordPerfect word processors also exerts strong network effects.

Network effects in the software industry can be both positive and negative from a consumer's point of view. Network externalities afford benefits to consumers in proportion to the size of the network.<sup>181</sup> The greater the number of people using a certain software program (i.e., the greater the size of the network), the less the users must worry about compatibility issues, and the more proficient these users may become at operating the software.

Conversely, path dependence, or lock-in, cabins consumer freedom by establishing a software protocol outside of which the consumer cannot conveniently work.<sup>182</sup> To expand on the Word-WordPerfect example above, consider the time required to be proficient in either program and the imperfect file conversion ability of either program.<sup>183</sup> If Word's market share grows and displaces WordPerfect's share of the market, consumers will see increased compatibility between their word processing ventures. But this increased compatibility comes at a price: consumers will be dissuaded from using WordPerfect because it is not seamlessly compatible with Word—the standard word processing program in this hypothetical—even if WordPerfect is a superior product.

Finally, the software industry, like other intellectual property sectors,

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<sup>179</sup> Cf. *Microsoft II*, 147 F.3d 935, 952 (D.C. Cir. 1998) (finding that the code shared between Windows and Internet Explorer was legitimate and value-adding); *Microsoft III*, 87 F. Supp. 2d 30, 49 (D.D.C. 2000) (disregarding that Windows and Internet Explorer shared code, and instead focusing on what consumers perceive as "commercial reality"—that the programs are separate).

<sup>180</sup> This Article briefly and selectively outlines these network effects. For a more thorough treatment of network effects in software, and their relation to antitrust, see Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1 (2001). For a non-legal perspective, see Jeffrey Rohlfs, *A Theory of Interdependent Demand for a Communications Service*, 5 BELL J. ECON. & MGMT. SCI. 16 (1974).

<sup>181</sup> Shelanski & Sidak, *supra* note 180, at 7–8.

<sup>182</sup> *Id.* at 8–9.

<sup>183</sup> File conversion in this context involves opening and editing a document or file in one program that was created in the other program.

is characterized by high initial costs in the form of research and design, coupled by extremely low marginal costs. The marginal cost of a software license—or sale, depending on your approach to click-through licenses—includes the almost inconsequential cost of the medium on which the software is fixed and the packaging which contains that fixation. But the per-unit cost increase of a software license also includes the significant but often overlooked cost of product support.<sup>184</sup>

Nonetheless, when contrasted to traditional, secondary industry—such as automobile manufacturing—the marginal cost of software is remarkably low. Such low marginal costs encourage bundling: “[A]s marginal costs rise, bundling creates an inefficiency because some consumers are forced to buy the bundle even though they value the components at less than their production costs.”<sup>185</sup> Thus, if bundling low marginal cost products is not efficient, it is at least minimally inefficient, as compared to the inefficiencies associated with a bundle consisting of products with higher marginal costs.

The detailed operation of the three aspects of the software market briefly outlined above is not settled. Chicago and Post-Chicago adherents vary on the extent to which economies of scope, network effects, and marginal costs affect the software market. But most agree that these aspects do have a disparate impact on the software market, as compared to traditional, secondary industry. The proposition that the software industry, and bundling within that industry, behaves differently than traditional industry—which served as the basis for antitrust tying jurisprudence—is well recognized, and sufficient for this Article.<sup>186</sup>

## B. The International Paradox of Software Bundling

If software markets do not behave like traditional, secondary industry markets, then why should antitrust law treat them as the same? If antitrust law was not meant to discourage innovation, then why enact a rule that gives software manufacturers no guidance on how to create multifunctional

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<sup>184</sup> While most hardware manufacturers take on this responsibility, it is nonetheless factored into the bargain for the OS license between the OS manufacturer, such as Microsoft, and the hardware manufacturer, such as Dell.

<sup>185</sup> See Sidak, *supra* note 22, at 11 (citing Barry Nalebuff, *Bundling as an Entry Barrier* (1999) (Working Paper, on file with the YALE JOURNAL ON REGULATION)).

<sup>186</sup> See, e.g., *id.* at 6. Sidak remarks that:

Some of the traditional economic explanations for product bundling more accurately fit smokestack industries than software. The network effects, low marginal costs, and rapid technological change in software create rationales for product integration that are both less familiar and more subtle than the bundling arguments that courts have previously encountered.

products without exposing themselves to tying liability? Yet software manufacturers that cater to the international market face both problems. In the European Union, their bundled products are treated no differently than hammers and nails; they are subject to the same unforgiving standard.<sup>187</sup> In the United States, however, their products are subject to a yet-to-be-defined rule of reason. Manufacturers are forced into unaided speculation on what a court may deem reasonable.

Despite being almost polar opposites, both the E.U. approach and the U.S. approach stifle innovation within the software industry. The E.U. rule, which focuses so heavily on consumer perception to determine whether products are integrated or separate, is inherently backward-looking.<sup>188</sup> Like the *Jefferson Parrish* consumer demand test, the E.U. approach retards innovation by prohibiting revolutionary bundles which have not yet displaced the demand for the previously separate components.<sup>189</sup> Recognizing this problem, the U.S. approach did away with any backward-looking test in favor of an amorphous rule of reason.<sup>190</sup> But this standard lacks guidance and inserts judge or jury into the position of armchair economist so that they may second-guess business decisions.

A better solution to the catch-22 of consumer demand and innovation<sup>191</sup> lies in a more structured and less retrospective rule. By crafting a standard which anticipates consumer demand while providing guidance and predictability, the *Caldera* analysis provided the better rule.<sup>192</sup> In the United States, *Caldera*'s rule dovetails nicely with existing Supreme Court precedent.<sup>193</sup> Indeed, *Caldera*'s rule is more akin to a focused exception to per se liability much like the exceptions past.<sup>194</sup>

Moreover, it provides software manufacturers with an idea of what is and is not a permissible bundle, instead of speculating as to what a judge or jury might find to be reasonable, the manufacturer need only ask itself whether the bundle is a "valid, not insignificant, technological

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<sup>187</sup> See Case COMP/C-3/37.792, *Microsoft Corp. v. Commission*, (unreported, March 24, 2004) (CEC), available at <http://europa.eu.int/comm/competition/antitrust/cases/decisions/37792/en.pdf>.

<sup>188</sup> See *supra* Part V.

<sup>189</sup> See *Microsoft III*, 253 F.3d at 92–93 (voicing concerns over the backward-looking Consumer Demand test's impact on innovation).

<sup>190</sup> See *id.* at 95.

<sup>191</sup> See *supra* Part II.C.

<sup>192</sup> *Caldera, Inc. v. Microsoft Corp.*, 72 F. Supp. 2d 1295, 1325 (D. Utah 1999) (“[I]f the evidence shows that a valid, not insignificant, technological improvement has been achieved by the integration of two products, then in essence a new product has been created, and a defendant is insulated from [Sherman Act] § 1 tying liability.”). See *supra* Part II.C.

<sup>193</sup> See *supra* Part II.C.

<sup>194</sup> See *supra* notes 34–44 and accompanying text.

improvement” over the prior art.<sup>195</sup> Who better than a manufacturer to anticipate whether its software bundle is a significant improvement, and therefore permissible? Thus, *Caldera*’s rule would allow developers to conform their conduct to the law.

At the same time, *Caldera*’s forward-looking rule would resolve the anti-innovation concerns of the E.U.’s approach and provide much-needed recognition for the special economic aspects of the software market. As software development advances, programs become more functional. To keep these functions manageable and user-friendly, developers merge them into fewer end products. This process moves toward end products which are fewer in number, offer more complex functions, and are easier to use.<sup>196</sup> By anticipating consumer demand, this rule would allow this natural progression of innovative software.<sup>197</sup>

## VII. CONCLUSION

Neither the current U.S. nor E.U. antitrust approach to software bundling is ideal. Both retard innovation in the software industry. The European Union refuses to differentiate between regular products and intangible, ephemeral software, despite well-recognized economic differences. Moreover, the European Union refuses to consider future demand for truly innovative products. Manufacturers are thus forced to comply with rules that do not contemplate their products. Although the United States no longer makes this mistake, it provides no guidance to what is a reasonable, and therefore permissible, software bundle. Software manufacturers are left to hazard guesses as to which bundles are permissible: manufacturers erring on the side of caution will not engage in some innovative and useful bundles for fear of exposure to antitrust liability.

*Caldera* advances a better rule, which is both structured and forward-looking. Thus, it suffers from neither of the faults outlined above and allows innovative software bundles. These bundles allow manufacturers to create more simplified products which are also more functional and are vital to the continued development of the software industry.

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<sup>195</sup> *Caldera*, 72 F. Supp. 2d at 1325.

<sup>196</sup> For instance, spell-checking programs and word processing programs were once offered independently of each other. The user was required to install both programs and deal with compatibility issues as best he could. Now, all word processing programs come integrated with a spell-checking program. Integration is seamless, compatibility issues are nonexistent, and the consumer benefits by having a simpler, more user-friendly program that also has increased capabilities.

<sup>197</sup> See *supra* Part II.C.



