

October 2002

## A Proposed Antitrust Approach to High Technology Competition

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# A PROPOSED ANTITRUST APPROACH TO HIGH TECHNOLOGY COMPETITION

THOMAS A. PIRAINO, JR.\*

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## INTRODUCTION

This Article discusses the most critical antitrust issue of the new century: how to regulate competition in Internet, medical, media, telecommunications, computer hardware and software, and other high technology markets. The form of such regulation will have implications beyond the high technology sector. During the 1990s, high technology innovations became the greatest drivers of U.S. economic growth. Traditional industrial firms began to use high technology to enhance their productivity.<sup>1</sup> New Internet software allowed firms to adapt their purchasing and production schedules to meet changing demand, thus smoothing out the peaks and valleys of the economic cycle. Linchpins of the "old economy," such as Ford and General Motors, began to collaborate in business-to-business (B2B) e-commerce ventures that allowed them to sell products and purchase supplies online.<sup>2</sup> A 1999 survey found that

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1. High technology products caused most of the improvement in American workers' productivity during the latter half of the 1990s. Many economists believe that such productivity is "the single most important factor affecting our economic well-being." Willow A. Sheremata, *Barriers to Innovation: A Monopoly, Network Externalities, and the Speed of Innovation*, 42 ANTITRUST BULL. 937, 937 (1997) (quoting PAUL KRUGMAN, *THE AGE OF DIMINISHED EXPECTATIONS: ECONOMIC POLICY IN THE 1990S*, at 17 (1990)); see also Louis Uchitelle, *Notions of New Economy Hinge on Pace of Productivity Growth*, N.Y. TIMES, Sept. 3, 2001, at A1 ("Productivity is the principal contributor to economic growth."). As one commentator recently pointed out, "There is little doubt that technology is somehow responsible for it all." Steve Liesman, *Productivity Gains Extend Beyond Technology Area*, WALL ST. J., Jan. 8, 2001, at A3; see also Richard W. Stevenson, *The Boom is Over: What's Next*, N.Y. TIMES, Nov. 4, 2001, § 4 (Week in Review), at 3. According to Stevenson:  
[T]echnology [in the 1990s] really was transforming the economy in concrete ways—in particular by helping to drive a resurgence in productivity, or the ability to produce more for less. After languishing for two decades, the growth rate of productivity—the single best indicator of an economy's ability to expand in a sustainable way—began accelerating around 1995.

*Id.*

2. Michael Totty, *The Next Phase*, WALL ST. J., May 21, 2001, at R8 (describing B2B among automobile companies and supply-chain management improvements made possible by the Internet and by new software); see David Leonhardt, *Wall Street Still Sees No Wolves in its Midst*, N.Y. TIMES, Aug. 12, 2001, § 3 (Money & Business), at 4 ("[C]ompanies are making decisions more quickly as a result of computer systems that give them up-to-date information about their business.... [C]ompanies have used this knowledge to cut jobs and hours more rapidly than in the past, laying the groundwork for a fast recovery."). A B2B involves a collaboration among competitors to develop and operate an Internet website for the sale of the parties' products or for the purchase of raw materials and other inputs used in the manufacturing process. Robert B. Bell & William F. Adkinson, *Antitrust Issues Raised*

American executives believed that they had exploited “only half of the potential of high-tech.”<sup>3</sup> Thus, continued productivity gains across the breadth of the U.S. economy could be at risk if antitrust policy does not create an environment conducive to high technology investments.

There is currently considerable debate about whether aggressive antitrust enforcement helps or hinders the development of high technology. That debate will be joined sharply in two cases whose outcome could determine the future control of the Internet: AOL Time Warner’s pending monopolization suit against Microsoft<sup>4</sup> (AOL) and the final remedial phase of the most recent of three cases brought by the government against Microsoft<sup>5</sup> (*Microsoft III*). A recent *Wall Street Journal* editorial posed the high technology dilemma as follows:

It’s increasingly clear that products whose primary value lies in intellectual property—products such as software, pharmaceuticals, movies, records and many of the other things that drive today’s economy—are fundamentally different from staples of the industrial economy such as autos and steel, or service-

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by *B2B Exchanges*, 15 ANTITRUST, Fall 2000, at 18, 18; see also David H. Evans, *B2Bs—A Technical Perspective*, 15 ANTITRUST, Fall 2000, at 45, 45 (describing B2B as “a place in cyberspace where buyers and sellers come together to trade in goods and services”).

3. Greg Ip & Jacob M. Schlesinger, *Did Greenspan Push High-Tech Optimism on Growth too Far?*, WALL ST. J., Dec. 28, 2001, at A1.

4. AOL Time Warner filed its complaint against Microsoft through its subsidiary, Netscape Communications Corporation, which it acquired in 1999. See Complaint in *Netscape Communications Corp. v. Microsoft Corp.*, Related to Civil Action Nos. 98-1232 and 98-1233 (D.D.C. filed Jan. 22, 2002).

5. *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) [hereinafter *Microsoft III*]. As the District of Columbia Circuit Court pointed out in *Microsoft III*, “We decide this case against a backdrop of significant debate amongst academics and practitioners over the extent to which ‘old economy’ ... [antitrust] doctrines should apply to firms competing in dynamic technological markets ....” *Id.* at 49. There were two earlier government cases against Microsoft. In the original case, filed in 1994, the government alleged that Microsoft unlawfully maintained a monopoly in the operating systems market through anticompetitive terms in its licensing and software development agreements. The case was settled in a consent decree. *United States v. Microsoft Corp.*, 56 F.3d 1448 (D.C. Cir. 1995) [hereinafter *Microsoft II*]. In the second case, the Government filed a civil contempt action alleging that Microsoft had violated one of the provisions of the consent decree by bundling its Internet Explorer web browser with its operating system. The District of Columbia Circuit Court held that Microsoft did not violate the consent decree. *United States v. Microsoft Corp.*, 147 F.3d 935 (D.C. Cir. 1998) [hereinafter *Microsoft II*].

economy products such as banking and insurance. And those fundamental differences are wreaking havoc with traditional notions of economics that underlie antitrust laws ....<sup>6</sup>

Some observers argue that the antitrust laws were designed to regulate competition in traditional industrial markets, where the effects of technological changes are relatively measured and predictable. When regulators understand the economic effects of particular conduct, they can condemn or approve it with relative confidence.<sup>7</sup> The courts and antitrust enforcement agencies, however, comprehend little about the ultimate economic effects of high technology.<sup>8</sup> They may therefore unintentionally preclude the development of promising new products by overregulating high technology industries.<sup>9</sup> Firms may be less willing to invest in

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6. Alan Murray, *Intellectual Property: Old Rules Don't Apply*, WALL ST. J., Aug. 23, 2001, at A1. The dilemmas of high technology antitrust enforcement were evident in the difficult decisions faced by the U.S. Department of Justice in prosecuting its most recent case against Microsoft in the fall of 2001. On one hand, the government feared that Microsoft would be able to hinder innovation in competing products if it were able to bundle new applications into the newest version of its operating system, Windows XP. On the other hand, if the government succeeded in keeping Windows XP off the market, it might harm the entire high technology sector of the economy, which was counting on Windows XP to jump start new sales of personal computers. Ted Birdis & Rebecca Buckman, *Microsoft Judge Signals Hearing May be Long*, WALL ST. J., Aug. 30, 2001, at A3. In a recent *New York Times* article David Pogue explained:

[Windows XP] is designed for very young, high-octane PC's ... and if it's a hit, the net effect is likely to be a wave of PC buying and upgrading. No wonder that executives at PC makers are walking around with dilated pupils and moist palms, hailing Windows XP as the savior that will deliver us from the tech slump, the recession and probably world hunger.

David Pogue, *Windows XP: Microsoft's New Look for Fall*, in *Size XXL*, N.Y. TIMES, Sept. 6, 2001, at D1.

7. See Frank H. Easterbrook, *Does Antitrust Have a Competitive Advantage?*, 23 HARV. J.L. & PUB. POL'Y 5, 8 (2000) (stating that regulators can "condemn or approve [conduct with clear competitive effects] out of hand").

8. See Adam Liptak, *Millions for Defense*, N.Y. TIMES, Feb. 4, 2001, at 10 ("Courts, which are rarely competent to regulate technology to begin with, surely cannot do it on a schedule entirely divorced from the pace of technical development.").

9. See Seth Schiesel, *Bringing Competition into the Age of the Internet*, N.Y. TIMES, Dec. 25, 2000, at C1 ("Many of the analytical and intellectual tools that competition authorities use these days were developed for slow-changing industries like manufacturing. But these methods may not be up to the task of dealing equitably with technology sectors where the competitive landscape can change significantly from year to year."); David Wessel, *Measuring Bush as Regulator in Chief*, WALL ST. J., Jan. 18, 2001, at A1 ("New technologies are altering almost every industry and challenging a government apparatus that was crafted to ease the

high technology if they fear that they will be penalized for their success.<sup>10</sup> As Judge Frank Easterbrook has stated, "People are quick to condemn what they do not understand. Hasty or uninformed judgments may condemn novel practices just because of their novelty."<sup>11</sup> Former Federal Communications Commission Chairman William Kennard has explained how regulatory restraint freed firms to make the investments necessary for the development of the Internet: "The best decision government ever made with the Internet was the decision the FCC made 15 years ago not to impose regulation on it.... It was intentional restraint born of humility."<sup>12</sup> In its 1998 *Microsoft II* decision, the District of Columbia Circuit Court declined to find Microsoft liable for tying its Internet browser to its "Windows" operating system, pointing out that since courts have limited competence in evaluating high technology product designs, they should be "wary of second-guessing the claimed benefits of a particular design decision."<sup>13</sup>

Some commentators have argued that antitrust enforcement is less necessary in high technology industries than in more traditional markets. They emphasize that the pace of technological change is so swift, and so transforming, that no firm can hold monopoly power in a high technology market for a meaningful period.<sup>14</sup> The "paradigm shifts" that occur in such markets "enable

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transition from the agricultural to the industrial age. New ways of doing things require new rules of the road.... Poorly conceived rules can stunt development of promising technologies.").

10. See David J. Teece & Mary Coleman, *The Meaning of Monopoly: Antitrust Analysis in High-Technology Industries*, 43 ANTITRUST BULL. 801, 809 (1998) (noting that "efforts to hobble the winner in one round of innovations will be seen as diminishing the returns available from competing in such high-risk environments, thereby diverting resources to other sectors of the economy displaying less risk and affording less innovation.").

11. Easterbrook, *supra* note 7, at 8; see also Fred L. Smith, Jr., *The Case For Reforming the Antitrust Regulations (If Repeal is not an Option)*, 23 HARV. J.L. & PUB. POL'Y 23, 43 (2000). Smith predicts that

this confusion will most likely occur in the frontier sectors of the economy, where innovations dominate. In other words, antitrust regulation will most likely go awry in newer, more complex areas of the economy where disruption is high. Populist confusion and reactionary dismay—the dominant forces driving political predation—are also likely in these areas.

*Id.*

12. James K. Glassman, *The FCC's Dangerous Internet Precedent*, WALL ST. J., Jan. 17, 2001, at A26.

13. *Microsoft II*, 147 F.3d 930, 950 n.13 (D.C. Cir. 1998).

14. See, e.g., John Schwartz, *The Land of Monopolies*, N.Y. TIMES, July 1, 2001, § 4 (Week

new entrants to upset the existing order” more quickly and more effectively than could any court or administrative agency.<sup>15</sup> Since high technology industries are self-correcting for market power, there is no need to risk the potential adverse effects of antitrust enforcement.

Many commentators and government enforcers insist, however, that antitrust can help ensure the efficiency of high technology industries. Robert Pitofsky, a former Chairman of the Federal Trade Commission, argues that the relevant issues in high technology industries are no different than those which antitrust has traditionally addressed: that is, the adverse effects of cartels and the abuse of monopoly power.<sup>16</sup> An October 2000 study conducted by the staff of the Federal Trade Commission (*FTC Staff Report*) concluded that B2Bs “are amenable to traditional antitrust analysis.”<sup>17</sup> Richard Blumenthal, Connecticut’s Attorney General, recently claimed that the District of Columbia Circuit Court’s decision in *Microsoft III* constituted “a sweeping and historic victory, not only for this case but also for the application of antitrust laws in the technology sector and the New Economy.”<sup>18</sup> Even advocates of less aggressive enforcement policies have concluded that antitrust has a role to play in high technology markets. Judge Richard A. Posner, a respected antitrust scholar and jurist of the more conservative “Chicago School,”<sup>19</sup> has opined that “antitrust doctrine is supple enough, and its commitment to

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in Review), at 3 (“Some commentators ... point to the fact that the technology market is so volatile that today’s monopolist is tomorrow’s loser—lessons learned by the makers of such products as Lotus 1-2-3 and Wordstar, which once dominated their worlds.”).

15. See Teece & Coleman, *supra* note 10, at 809 (observing that “paradigm shifts periodically enable new entrants to upset the existing order—something rather rare in mature industries.”).

16. See Joel M. Mitnick, *A Structural Approach to Analyzing Competition in B2B e-Commerce*, 15 ANTITRUST, Fall 2000, at 31, 32 (referring to Pitofsky’s argument that “the antitrust issues arising in the high technology context are the same issues that antitrust has traditionally addressed”).

17. FTC, ENTERING THE 21<sup>ST</sup> CENTURY: COMPETITION POLICY IN THE WORLD OF B2B ELECTRONIC MARKETPLACES, Executive Summary, at 2, at <http://www.ftc.gov/0s/2000/10/b26report.pdf> (Oct. 2000) [hereinafter FTC STAFF REPORT].

18. Ted Birdis, *Microsoft Ruling: A High Antitrust Test*, WALL ST. J., July 2, 2001, at B4.

19. For a discussion of the development of the “Chicago School” approach to antitrust, see Thomas A. Piraino, Jr., *The Case for Presuming the Legality of Quality Motivated Restrictions on Distribution*, 63 NOTRE DAME L. REV. 1, 1 n.6 (1988).



economic rationality strong enough, to take in stride the competitive issues presented by the new economy."<sup>20</sup>

Unfortunately, the courts have established confusing and inconsistent standards for the regulation of high technology competition.<sup>21</sup> The courts' analytical failure could have profound implications for the American economy in the twenty-first century as firms are deterred from investing in high technology.<sup>22</sup> It is critical that the courts adopt a new approach that gives clearer guidance on the types of high technology competition that will be permitted or precluded. As a recent editorial in the *Wall Street Journal* pointed out, "In a world where intellectual property serves as the source of greatest value, antitrust policy ... may turn out to be more important than ever before. That means the government and the courts face a greater challenge to get it right."<sup>23</sup>

The greatest threat to competition in high technology markets stems from exclusionary conduct undertaken by joint ventures and by individual firms with monopoly power. Since its enactment in 1898, the Sherman Act has set forth the standards for judging such conduct. Section 1 of the Act deals with relationships among competitors, prohibiting "[e]very contract, combination ... or conspiracy, in restraint of trade ...."<sup>24</sup> Section 2 makes it illegal for any firm to "monopolize, or attempt to monopolize" interstate commerce.<sup>25</sup> Although originally designed for traditional industries such as steel, railroads, and oil, these standards are just as applicable to today's computer hardware and software, telecommunications, and e-commerce firms. In fact, two antitrust doctrines developed in the late nineteenth and early twentieth century are particularly appropriate for twenty-first century high technology firms. Both of these doctrines recognized that the objective of antitrust is not to dictate the outcome of the competitive struggle, but simply to ensure that the competitive process

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20. Richard A. Posner, *Antitrust in the New Economy*, 68 ANTITRUST L.J. 925, 925 (2001).

21. See *infra* notes 134-35, 253-86, and accompanying text.

22. See Steven Syre & Charles Stein, *Next New Thing Will Have to be Optimism*, CLEV. PLAIN DEALER, Oct. 13, 2001, at C2 ("The soul of the [high technology] economy is the ability and willingness to take bigger risks ....") (quoting MICHAEL MANDEL, *THE COMING INTERNET DEPRESSION* (2000)).

23. Murray, *supra* note 6, at A1.

24. 15 U.S.C. § 1 (2000).

25. *Id.* § 2.

is conducted fairly. Thus, antitrust regulation should be concerned more with the conduct of firms than with the structure of markets. The "essential facilities doctrine," established in 1912, did not outlaw monopolies, but merely precluded them from arbitrarily denying competitors access to their resources.<sup>26</sup> Similarly, the "ancillary restraints doctrine," which dates back to 1898, did not forbid firms from collaborating in joint ventures, but simply forbade them from conspiring to limit competition in areas outside the legitimate scope of their venture.<sup>27</sup>

Such precedent provides a basis for regulating today's high technology industries. The courts should recognize that it is inevitable, and even beneficial, for individual firms and joint ventures to obtain market power in high technology markets. The problem with high technology monopolies and joint ventures stems not from their existence but from their conduct. Instead of precluding such monopolies and joint ventures, the courts should ensure that they do not engage in conduct that unduly perpetuates or extends their market power.

Such a conduct-based approach to high technology competition plays to the federal judiciary's strengths. Judges and juries are adept at determining the purpose and motivation for defendants' conduct. They are "well suited to the task of holding individual firms accountable for their conduct."<sup>28</sup> It is a task they face every day in resolving legal disputes. Courts, however, have little competence to determine the structure of markets or the precise economic effects of agreements among competitors. Fortunately, a defendant's purpose for engaging in certain behavior usually can be counted upon to reveal its likely impact on competition.<sup>29</sup> By concentrating on such a purpose, the federal courts can distinguish more effectively between the competitive abuses that should be deterred and the innovative conduct that should be encouraged in high technology markets.

Part I of this Article describes the tendency of high technology markets to confer a durable form of monopoly power on the first

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26. See *infra* notes 169-70 and accompanying text.

27. See *infra* notes 291-93 and accompanying text.

28. Lawrence A. Sullivan, *Economic and More Humanistic Disciplines: What are the Sources of Wisdom for Antitrust?*, 125 U. PA. L. REV. 1214, 1224 (1977).

29. See *infra* notes 129-32 and accompanying text.

firm to successfully commercialize a new product. Part II explains how collaborations among competitors have the ability both to mitigate and to reinforce this trend to monopoly. Part III describes a proposed new means of analyzing high technology competition. Part IV explains how the approach would apply to particular types of monopoly conduct by high technology firms, and Part V applies the approach to high technology joint ventures. Part VI explains how certain types of collaborations would be treated under the proposed approach. Part VII describes the proposed analysis of restraints on competition among the partners to high technology joint ventures, and Part VIII sets forth a proposed approach to the monopoly conduct of high technology joint ventures.

## I. THE ECONOMIC CHARACTERISTICS OF HIGH TECHNOLOGY MARKETS

High technology markets have unique economic characteristics that distinguish them from traditional industrial markets. As former FTC Chairman Robert Pitofsky has stated, "High tech ... markets, are different .... The kind of static analysis that we often have applied in the past ... is in fact unlikely to be fully adequate to take high tech into account."<sup>30</sup>

### *A. Initial Competition for the Market*

High technology markets are defined by their rapid pace of innovation. Technological breakthroughs can alter markets almost overnight. The explosion in computing power has shortened the time required to develop a new product or to copy a rival's product. "Moore's Law" is often used to describe the increasingly rapid pace of change: the power of a silicon chip will double every eighteen to twenty-four months, accelerating the rate of technological advances.<sup>31</sup> C.K. Prahalad, a professor at the University of Michigan Business School, has pointed out that the "[t]ime lines

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30. Schiesel, *supra* note 9, at C3.

31. *Five Questions for Gordon E. Moore: Technology Intensifies the Law of Change*, N.Y. TIMES, May 27, 2001, § 3 (Money & Business), at 4. Moore's Law is named after Gordon E. Moore, a co-founder of Fairchild Semiconductor, who described the phenomenon in a 1965 article in *Electronics Magazine*. *Id.*

which used to be measured in 5- to 10- year periods are now down to 2 years ....<sup>32</sup> The acceleration of technological cycles is evident in the time it took Americans to adopt four major technologies—the telephone, the television, the personal computer, and the Internet. It took forty years for 30% of Americans to own a telephone, seventeen years for 30% of Americans to own a television, thirteen years for 30% of Americans to own a personal computer, and only seven years for 30% of Americans to come online on the Internet.<sup>33</sup>

Because of the rapid pace of innovation, firms participating in high technology markets are subject to greater risks and potentially can reap greater rewards than firms in more traditional industrial markets. Competition is intense, and success is uncertain for firms at the initial stage of a high technology product cycle. The innovation that occurs in high technology markets frequently causes major paradigm shifts. Andy Grove, the CEO of Intel, refers to these shifts as “major inflexion points.”<sup>34</sup> Firms that do not correctly predict the next product that will catch consumers’ fancies will fail. Indeed, in most high technology markets, only one or a very few firms can be successful. However, for those firms that do succeed, the rewards can be enormous. As they mature, high

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32. David Leonhardt, *Uneasy Pieces in an Era of Mergers*, N.Y. TIMES, Nov. 5, 2000, § 3 (Money & Business), at 1.

33. Daniel J. Meckstroth, MANUFACTURERS’ ALLIANCE/MAPI, *How New B2B E-Business Strategies are Changing Manufacturing*, Jan., 2001, at 2 (on file with author) [hereinafter MAPIREPORT]. There are many examples of creative destruction in high technology markets. Henderson and Clark studied five generations in the semiconductor photolithographic alignment equipment industry, and they concluded that no firm that led in one generation figured prominently in the next. Rebecca M. Henderson & Kim B. Clark, *Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms*, 35 ADMIN. SCI. Q. 9 (1990); see also Teece & Coleman, *supra* note 10, at 805 (discussing Henderson and Clark’s study). Xerox’s control over the copier market, for example, evaporated in the 1970s. See Kevin Dooley, *The Paradigms of Quality: Evolution and Revolution in the History of the Discipline*, at <http://www.eas.asu/~kdooley/papers/qualityparadigm.pdf> (last visited Sept. 5, 2002) (referring to the decline in Xerox’s share of the U.S. copier market from ninety-six to forty-six percent in the 1970s). In the 1980s and 1990s IBM lost much of its dominance in computers due to advances in microchip technology that allowed personal computers to do the work of mainframes at a fraction of the cost. David L. Rubinfeld, *Antitrust Enforcement in Dynamic Network Industries*, 43 ANTITRUST BULL. 859, 875 (Fall-Winter 1998). Some commentators argue that even the dominance of Microsoft’s Windows operating system is now being eroded by the growth of the Internet. Gary S. Becker & Kevin M. Murphy, *Rethinking Antitrust*, WALL ST. J., Feb. 26, 2001, at A22.

34. Teece & Coleman, *supra* note 10, at 804.

technology markets tend to coalesce around single products that create the standard for an entire industry. Firms that bet correctly on the next paradigm shift can reap the traditional benefits of monopoly power: high prices, healthy profit margins, and relative immunity from new entrants.<sup>35</sup> Consider Xerox in copier machines in the 1970s, IBM in mainframe computers in the 1980s, and Microsoft in operating systems in the 1990s. Because of the advantages that will accrue to the "first mover" to be successful in a network market, there is likely to be fierce competition among firms for the ultimate winner-take-all position.<sup>36</sup> This early competition is often referred to as "competition for the market."<sup>37</sup> As one commentator explained, "Like purchasers of lottery tickets, companies seem even more eager to compete when they know the winner will take all. Instead of competing on price, they compete by innovating, and trying to leapfrog old technologies."<sup>38</sup>

Thus, in high technology markets, antitrust regulators must walk a fine line between overenforcement and underenforcement. At the initial stages of a high technology market, the courts and agencies must avoid regulation that discourages firms from competing to capture the market. In mature high technology markets, however, antitrust enforcers should be more willing to

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35. See William J. Holstein, *To Gauge the Internet, Listen to the Steam Engine*, N.Y. TIMES, Aug. 26, 2001, § 3 (Money & Business), at 5 ("If you get on the right bandwagon, you get enormously rich. Of course, guessing the right horse is very difficult, especially when there are 10,000 horses in the race.") (quoting author John Steele Gordon).

36. See John E. Lopatka & William H. Page, *Antitrust on Internet Time: Microsoft and the Law and Economics of Exclusion*, 7 SUP. CT. ECON. REV. 157, 169 (1999) ("The market's tendency to tip makes the early competition in network markets with incompatible standards particularly intense."); William J. Kolasky, Jr. & William F. Adkinson, Jr., *Single Firm Conduct: Who's Big? What's Bad?*, Presentation Before the American Bar Association Section of Antitrust Law 30 (Apr. 15, 1999) (on file with author) ("If the ultimate market outcome is likely to be a monopoly of the surviving firm, with the opportunity to earn substantial rents, competition among firms to be the survivor will be intense.")

37. See Joseph Farrell & Michael L. Katz, *The Effects of Antitrust and Intellectual Property Law on Compatibility and Innovation*, 43 ANTITRUST BULL. 609, 611 (1998) (observing that "when firms recognize the possibility of tipping, they may compete vigorously to become the dominant supplier: so-called competition for the market").

38. Alan Murray, *For Policy Makers, Microsoft Suggests Need to Recast Models*, WALL ST. J., June 9, 2000, at A1. Michael Powell, the Chairman of the FCC, has pointed out that in high technology industries the incentive of potential monopoly power encourages investment: "Companies that invest the money and take the risks need to be able to reap the rewards for a while, or else they lose all incentive to innovate ...." Yochi J. Dreazen, *FCC's Powell Quickly Marks Agency as His Own*, WALL ST. J., May 1, 2001, at A28.

intervene to prevent dominant firms from using their market power to raise already substantial entry barriers.

### *B. The Trend to Monopoly in Mature Markets*

Although competition is often intense at the initial stage of a high technology product cycle, it is likely to slacken, or even disappear, as the market matures. In fact, the natural evolution of most high technology markets is from competition to monopoly. This trend to monopoly occurs as a result of the “network effects” present in most high technology markets.

A network includes any system “that structures and facilitates the exchange of information, money, goods, or services among individuals or firms.”<sup>39</sup> Networks control many high technology markets. Indeed, one commentator recently opined that “[t]he extraordinary innovations of our modern world are increasingly the result of networks ....”<sup>40</sup> Examples include the Internet, B2Bs, telecommunications systems, computer operating systems, transportation systems, stock exchanges, and ATM and credit card systems. Users of networks benefit from the ability to access and connect with each other.<sup>41</sup> By adopting uniform standards for interconnection, networks assure that all participants can use the system on equal terms.

Because networks can only operate effectively under a single standard, they tend to vest dominant market power in the firm that owns the standard, leaving little, if any, room in the relevant market for other players. As one commentator pointed out, “You either win big—like Microsoft—or lose big—like the pile of dot-com carcasses building up in Nasdaq’s wreckage. In these industries, there is no Avis.”<sup>42</sup> Many observers believe that monopolies are inevitable in network markets because of consumers’ demand for

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39. William H. Pratt et al., *Refusals to Deal in the Context of Network Joint Ventures*, 52 BUS. LAW. 531, 533 (1997).

40. George L. Priest, *A Ruling for ‘Predators’—and Consumers*, WALL ST. J., May 3, 2001, at A18.

41. See A. Douglas Melamed, *Network Industries and Antitrust*, 23 HARV. J.L. & PUB. POL’Y 147, 149 (2000) (describing how network users “can access and benefit from one another”).

42. Murray, *supra* note 6.

one compatible technical standard.<sup>43</sup> The tendency of network markets to coalesce around a single standard is often referred to as the “tipping” effect.<sup>44</sup> Once a particular standard gains enough acceptance to be perceived by most consumers as the ultimate technological winner, the market “tips” and consumers migrate to that standard en masse.<sup>45</sup> Early users of a particular network often “join in anticipation of other users hopping on the bandwagon at a later date.”<sup>46</sup> Even “[i]nferior products win if they are expected to do so.”<sup>47</sup> There are many examples of network markets that started out as competitive but ultimately came to be dominated by one or a few firms. In the video recording market, the VHS format achieved such an advantage over the Beta format,<sup>48</sup> and in computer operating systems, Microsoft prevailed over IBM, Apple Computer, and Novell.<sup>49</sup>

The trend to monopoly in high technology markets is augmented by a set of circumstances that economists call “network externalities.” This phenomenon results from the fact that the

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43. See David A. Balto & Robert Pitofsky, *Antitrust and High-Tech Industries: The New Challenge*, 43 ANTITRUST BULL. 583, 604 (1998) (“In industries characterized by networks even monopoly is seen by some observers as inevitable and merely an accommodation to consumer demand for a compatible technical standard.”); Rubinfeld, *supra* note 33, at 876 (“With consumer preferences for uniformity in products and compatibility in complementary products, dominant firms operating with a single standard are likely to develop in dynamic network industries.”); Steve Lohr, *Open Windows: The New Math of Monopoly*, N.Y. TIMES, Apr. 9, 2000, § 4 (Week in Review), at 1 (“[Network markets] tend to naturally evolve toward one or two dominant companies (think Cisco in routers for Internet data or eBay in online auctions). They control the technology standards in their markets.”).

44. See Sheremata, *supra* note 1, at 958.

45. See *id.* (describing how “[o]ne standard eventually dominates” in network markets); Paul Krugman, *Rights of Bill*, N.Y. TIMES, Apr. 9, 2000, § 4 (Week in Review), at 17 (“High-tech competition naturally and necessarily looks like a series of winner-take-all tournaments, in which ‘all’ means a temporary monopoly that lasts until something dramatically better comes along.”); see also Mark A. Lemley & David McGowan, *Could Java Change Everything? The Competitive Propriety of a Proprietary Standard*, 43 ANTITRUST BULL. 715, 721 (1998) (“[O]nce consumers perceive that a de facto standard has been established, tipping will occur very quickly.”).

46. Balto & Pitofsky, *supra* note 43, at 588.

47. Sheremata, *supra* note 1, at 958; see also *id.* at 954 (describing how “consumers will get ‘locked into’ the first product that appears on a new platform, even when the product is technologically inferior”).

48. See Sheremata, *supra* note 1, at 958 (pointing out that “VHS dominated Beta formats”).

49. See Robert Prentice, *Vaporware: Imaginary High-Tech Products and Real Antitrust Liability in a Post-Chicago World*, 57 OHIO ST. L.J., 1163, 1229 n.270 (1996).

benefits to a particular user increase in direct proportion to the number of other users in the network.<sup>50</sup> As a network expands, its users can communicate with a greater number of fellow members. Consumers are naturally attracted to successful networks because of their greater utility. Network externalities thus reinforce the market power of a dominant network. A telephone system is more valuable if it is connected to a larger number of telephones. Stock exchanges gain their utility by bringing together the maximum number of buyers and sellers of public securities. An ATM system is more attractive to consumers if several different charge cards can be used at a single access point.<sup>51</sup> Consumers subscribe to a dominant Internet access provider such as AOL because they want to be able to communicate with the widest range of other users.<sup>52</sup> Computer operating systems, such as Microsoft's Windows program, become more valuable as additional applications are

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50. See, e.g., *United States v. Microsoft Corp.*, 84 F. Supp. 2d 9, 20 (D.D.C. 1999) [hereinafter *Microsoft III-Findings of Fact*] ("A positive network effect is a phenomenon by which the attractiveness of a product increases with the number of people using it."); Lemley & McGowan, *supra* note 45, at 718 ("In other words, a network effect exists if the consumer finds a good more valuable as additional consumers use the same good."); Sheremata, *supra* note 1, at 952 ("Direct network externalities exist when the value of a good to any user is a function of network size."); MAPI REPORT, *supra* note 33, at 4 (noting that "Robert Metcalfe, designer of the Ethernet protocol and founder of 3Com, calculated the 'network effect' in this way: the value of a network equals the square of the number of members on the network."). Timothy Muris, the current Chairman of the FTC, has argued, however, that there is simply no empirical evidence supporting the network effects theory. See Timothy J. Muris, *GTE Sylvania and the Empirical Foundations of Antitrust*, 68 ANTITRUST L.J. 899, 908 (2001) (claiming that "empirical evidence supporting this strong version of the network effects theory is lacking").

51. See David A. Balto, *The Murky World of Network Mergers: Searching for the Opportunities for Network Competition*, 42 ANTITRUST BULL. 793, 846 (1997) ("[A]n ATM network expands the number of its financial institution members and ATMs, its value to network cardholders increases due to the greater accessibility of their deposit accounts.")

52. See Alan Murray, *In the New Economy, You've Got Scale*, WALL ST. J., Jan. 17, 2000, at A1 ("[N]etwork businesses often become more valuable to their customers the bigger they get. Adolescents want AOL so they can chat with their buddies ...."). John Schwartz offered one example, explaining that

[t]he power of the network effect can be seen in technologies like America Online's Instant Messenger. Once teens realized that they could gab after school online, it became a must-have ... and its use exploded, rapidly bringing AOL a near-lock on a market of more than 100 million people.

Schwartz, *supra* note 14, at 3. Former Treasury Secretary Lawrence Summers has used the example of a fax machine to describe network externalities: "If there is only one, 'it is best used as a doorstop.' But if there are 100,000, 'that is 10 billion possible connections.'" Murray, *supra* note 38, at A8.



developed to run on a particular system.<sup>53</sup> In the case of credit card systems, “the more cardholders in the system, the more attractive the system is to merchants.... [T]he more merchants in the system, the more attractive the card is to cardholders.”<sup>54</sup>

The trend to monopoly is particularly pronounced in e-commerce markets, which link thousands or millions of users. The Internet has been referred to as a “land grab,” in which the first dominant player in a market “walks off with most of the booty.”<sup>55</sup> As one commentator has pointed out, “it’s all about being the lead player, and success breeds success.... This process is self-reinforcing, so the strong get stronger.”<sup>56</sup> Furthermore, the number one player in e-commerce markets often reaps the greatest stock market valuations, giving it an advantage over its competitors in pursuing acquisitions to consolidate its market power.<sup>57</sup> Some consultants refer to the competitive difficulties of secondary players in e-commerce markets as “the plight of the silver medalist.”<sup>58</sup>

The trend to monopoly is evident in the recent consolidation of various B2B markets.<sup>59</sup> The larger a B2B, the more likely it is to attract participants.<sup>60</sup> The advantages of economies of scale in a B2B purchasing venture, for example, encourage firms to join the largest B2B in the relevant market.<sup>61</sup> This creates “a real potential for the market for exchange services to ‘tip’ in favor of the exchange that emerges as the early leader or with the most impressive array

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53. See *infra* notes 93-99 and accompanying text.

54. Nat'l Bancard Corp. v. VISA U.S.A., Inc., 596 F. Supp. 1231, 1260 (S.D. Fla. 1984), *aff'd*, 779 F.2d 592 (11th Cir. 1986).

55. Bernard Wysocki, Jr., *No. 1 Can be Runaway Even in a Tight Race*, WALL ST. J., June 28, 1999, at A1.

56. *Id.* (quoting Cornell University economics professor Robert H. Frank).

57. *Id.*

58. *Id.*

59. One commentator has pointed out that B2B markets are “moving from a period of manic innovation into a period of consolidation and standardization.” Kenneth W. Gilpin, *Technology Wreckage: Yes, More to Come*, N.Y. TIMES, Feb. 11, 2001, § 3 (Money & Business), at 7 (quoting Roger McNamee, General Partner, Integral Capital Partners).

60. As the *FTC Staff Report* points out:

[I]n B2B marketplaces, network effects are present where the more buyers there are in a particular marketplace, the more likely any given seller will be to find a buyer and get a good price, and likewise for buyers being able to purchase necessary goods and services with more sellers in the marketplace.

FTC STAFF REPORT, *supra* note 17, Part 1, at 20.

61. See *infra* note 371 and accompanying text.

of initial participants.<sup>62</sup> Indeed, since January 2000, many B2B exchanges have gone out of business.<sup>63</sup> With more transaction volume concentrated in a few firms, it will become more difficult for new B2Bs to enter these markets.<sup>64</sup> Thus, B2B markets appear to be fulfilling the forecast of many economists who “have long predicted that the New Economy would promote a concentration of the market in the hands of a small number of competitors.”<sup>65</sup>

### *C. High Technology Monopolies' Effects on Consumers*

From the days of the early English common law, monopolies have been considered harmful because they raise prices, reduce output, and hamper innovation.<sup>66</sup> Modern economists emphasize that monopolies misallocate and waste economic resources.<sup>67</sup> To the extent that monopolists can price products in excess of the level that would prevail in a competitive market, they are able to bring about a transfer of wealth from consumers to themselves.<sup>68</sup>

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62. Bell & Adkinson, *supra* note 2, at 19; see also *Roundtable on B2B Exchanges*, 15 ANTITRUST, Fall 2000, at 8, 10 (comments of Professor Sunil Gupta, Graduate School of Business, Columbia University) (“[T]here is an impression that due to network effects there will be one dominant exchange in every industry.”).

63. See Lee Gomes, *How Lower-Tech Gear Beat Web 'Exchanges' at Their Own Game*, WALL ST. J., Mar. 16, 2001, at A1 (“[M]any exchanges have shut down, and virtually all the rest are badly behind in implementing their business plans.”).

64. See FTC STAFF REPORT, *supra* note 17, Part 2, at 20 (describing rising barriers to entry in B2B markets).

65. Greg Ip, *Blame the Profit Dive on a Marked Change in Companies' Costs*, WALL ST. J., May 16, 2001, at A1; see also Kara Swisher, *The Beast and the Borg Take to the Ring*, WALL ST. J., June 11, 2001, at B1 (referring to “several recent studies showing a continued dramatic contraction of the Internet industry and a troubling trend of domination by only a few huge companies, particularly AOL and Microsoft”).

66. In the *Case of Monopolies*, 77 Eng. Rep. 1260 (K.B. 1603), which involved the monopolization of the playing card market, Lord Coke concluded that the vices of monopoly were that

the price of the same commodity will be raised, for he who has the sole selling of any commodity, may and will make the price as he pleases.... [And] the [quality of the] commodity is not so good and merchantable as it was before: for [he who has] the sole trade, regards only his private benefit, and not the common wealth.

*Id.* at 1263.

67. See Herbert Hovenkamp, *Antitrust's Protected Classes*, 88 MICH. L. REV. 1, 6 (1989) (describing wealth transfer from consumers to monopolists).

68. See *id.* Furthermore, a “deadweight loss” occurs in monopoly markets because a monopolist has the ability unilaterally to reduce output in order to increase prices. *Id.* Since

Consider the local cable and telephone markets in the United States, where most firms still hold monopoly power.<sup>69</sup> In the absence of competition, these providers have had little incentive to lower prices or to improve their service.<sup>70</sup> In fact, since 1996, cable rates in the United States have risen almost three times as fast as the rate of inflation.<sup>71</sup> Comparative prices in the local and long-distance telephone markets illustrate the differences between monopoly and competitive markets. In long-distance telephone markets, where several firms compete to provide service, prices have declined almost thirty-four percent since 1984, but in local telephone markets, where the "Baby Bells" have retained their monopoly power, prices have increased over seventy percent in that same period.<sup>72</sup>

Many antitrust commentators believe that monopolists have less incentive to innovate than firms which lack such market power. In 1945, in *United States v. Aluminum Co. of America (ALCOA)*,<sup>73</sup> Judge Learned Hand emphasized that monopoly power "deadens initiative, discourages thrift and depresses energy; ... the spur of constant stress is necessary to counteract an inevitable disposition to let well enough alone."<sup>74</sup> Some economic studies have indicated that monopolists engage in less research and development than

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the monopolist makes no profit on the output it does not produce, a portion of the wealth taken away from consumers is not transferred to the monopolist but is simply "lost." *Id.* at 14 (describing "wealth that is taken away from consumers but which is not given to the monopolist"). Some economists argue that society as a whole is not harmed by the mere transfer of wealth from consumers to monopolists, because there is no efficiency loss. The only loss to society occurs from the deadweight loss, which eliminates wealth that would otherwise be generated if resources were allocated more efficiently. *Id.*

69. "[F]ewer than 5% of the residential customers in the U.S. have a choice of local-service companies." C. Michael Armstrong, *Break Up the Baby Bells!*, WALL ST. J., Mar. 28, 2001, at A22.

70. Jared Sandburg, *The Big Telecom Disconnect*, WALL ST. J., May 3, 2001, at B1 ("Lacking competition, incumbent cable and phone companies have been raising prices, and they have relatively little pressure to improve shoddy service.").

71. Rebecca Blumenstein, *Reform Act Hasn't Delivered Promises to Customers*, WALL ST. J., May 3, 2001, at B1.

72. Seth Schiesel, *Sitting Pretty: How Baby Bells May Conquer Their World*, N.Y. TIMES, Apr. 22, 2001, § 3 (Money & Business), at 1.

73. 148 F.2d 416 (2d Cir. 1945).

74. *Id.* at 427.

firms in competitive markets and that new products are developed more efficiently by smaller firms.<sup>75</sup>

Despite the potential problems with monopoly power, consumers are not always disadvantaged when a firm dominates a particular market. Indeed, in certain respects, monopolies can benefit consumers. The prospect of obtaining a monopoly, and the superior returns associated with it, often induce firms to enter new markets they otherwise would have avoided.<sup>76</sup> In many cases, firms obtain monopolies simply because they have been the most successful in meeting consumers' demands for low prices and innovative products. In high technology markets, monopolies can be particularly beneficial to consumers. Monopolies in network industries establish uniform standards that make it easier for consumers to connect to the network and interact with other users.<sup>77</sup> Some observers believe that the monopoly Microsoft acquired during the 1990s in operating systems for personal computers has been responsible for "the rapid evolution of the PC ... from a glorified typewriter and adding machine to a multimedia communication device."<sup>78</sup> By establishing a consistent worldwide

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75. See Douglas H. Ginsburg, *Antitrust, Uncertainty, and Technological Innovation*, 24 ANTITRUST BULL. 635, 649 (1979) ("Studies have indicated ... that small firms are more efficient than larger ones in conducting research."); Mark Green, *Have the Antitrust Laws Promised Too Much and Accomplished Too Little? Answer Yes*, 46 ANTITRUST L.J. 752, 755 (1977) ("The best studies of size and innovation demonstrate that moderate sized firms are the most innovative—not our largest firms who like to coast with a comfortable status quo."); Mark A. Lemley & Lawrence Lessig, *The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era*, 48 UCLA L. REV. 925, 961 (2001) (citing a study that demonstrates that "innovations were deployed faster in competitive markets than in monopoly markets").

76. See Muris, *supra* note 50, at 909 n.44 ("[M]onopoly may be the necessary reward for some winners in high-tech competition because monopoly allows for recovery of the high costs of innovation ....") (quoting speech of former Secretary of Treasury Lawrence Summers).

77. See Stephen Labaton, *Airlines and Antitrust: A New World. Or Not.*, N.Y. TIMES, Nov. 18, 2001, § 3 (Money & Business), at 1 ("The old antitrust principles do not apply easily because there are countervailing benefits to consumers—like lower prices, standardization or more frequent service—when control of the industry is in the hands of a few companies."). The benefits of uniform technological standards are evident in the contrast between wireless phone performance in the U.S. and most of the rest of the world. The United States never was able to settle on a single standard for wireless phone technology "and that blunder has resulted in a patch-work of multiple, incompatible technologies." Walter S. Mossberg, *A Guide to the Lingo You'll Want to Learn for Wireless Technology*, WALL ST. J., Mar. 28, 2002, at B1. By contrast, Europe and most other countries settled on a single standard thus have "better and more innovative wireless phones and wireless services." *Id.*

78. *Finally, A Settlement*, WALL ST. J., Nov. 2, 2001, at A14. As one commentator has

standard for operating systems, Windows has allowed independent firms to write a nearly unlimited number of programs for word processing, spreadsheets, databases, games, electronic mail, instant messaging, Internet browsers, and other applications.<sup>79</sup>

#### *D. The Persistence of High Technology Monopolies*

The problem with high technology monopolies stems from their ability to persist beyond their useful economic life. If monopolies were truly transitory, the courts would not need to regulate them at all. Free competition could be counted upon to induce rivals to enter a market and undercut a monopolist's power.<sup>80</sup> As long as a firm feels that its market power can be challenged, it will continue to seek efficiency gains even after it achieves a monopoly.<sup>81</sup> When a monopoly is well entrenched, however, a firm may not feel compelled to continue to pursue efficiencies.<sup>82</sup> Such firms are more likely to engage in the most harmful monopolistic conduct,

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explained, "A common operating system that everyone can use provides enormous benefits." Jonathan M. Jacobson, *Do We Need a "New Economy" Exception for Antitrust?*, 15 ANTITRUST, Fall 2001, at 89, 92.

79. One observer recently pointed out, "the fact that everyone uses ... [Microsoft's products], like the fact that so many people speak English, is in itself a social good." Paul Krugman, *Making Windows Transparent*, N.Y. TIMES, Nov. 4, 2001, § 4 (Week in Review), at 13.

80. Judge Easterbrook has noted, "No one doubts that this occurs. The question is, 'how long does it take?'" Easterbrook, *supra* note 7, at 7.

81. See 2 PHILLIP AREEDA & DONALD F. TURNER, ANTITRUST LAW, ¶ 505 (1978). Joseph Schumpeter believed that the fear of losing monopoly power guarantees that firms will continue to engage in innovation even after they have achieved a monopoly. See JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY 81-106 (3d ed. 1950); see also Microsoft III-Findings of Fact, 84 F. Supp. 2d 9, 26 (D.D.C. 1999) ("[A]lthough Microsoft could significantly restrict its investment in innovation and still not face a viable alternative to Windows for several years, it can push the emergence of competition even farther into the future by continuing to innovate aggressively.").

82. According to the court in *United States v. VISA U.S.A., Inc.*:

The higher the barriers to entry, and the longer the lags before new entry, the less likely it is that potential entrants would be able to enter the market in a timely, likely, and sufficient scale to deter or counteract any anticompetitive restraints.... Where barriers to entry are high, ... a monopolist would find it easier to raise prices because it would be unlikely that a competitor would, or could, enter the market.

163 F. Supp. 2d 322, 342; see also *Beltway on Top*, WALL ST. J., June 9, 2000, at A18 ("The only incentive to produce anything is the possession of *temporary* monopoly power.") (emphasis added).

including raising prices, deferring innovation, and reducing output in ways harmful to consumers.

Some commentators have argued that monopolization should not be a concern in high technology industries because the rapid pace of technological change will act as a natural counterweight to a firm's market power.<sup>83</sup> These observers believe that high technology markets confer only brief "serial monopolies" on firms which disappear when nimbler rivals appear.<sup>84</sup> At the initial stage of a product cycle, the commercialization of a new product generates high returns. Market leaders may price their products at a level that yields the highest short-run profit but encourages new entry on a long-term basis.<sup>85</sup> Returns then decline precipitously as firms cut prices to the level of their costs.<sup>86</sup> Joseph Schumpeter, an early

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83. The bursting of the NASDAQ high technology stock "bubble" in 2001 and 2002 has been cited as an example of the "boom-and-bust" cycle typical of high technology industries. See David Wessel, *Steering the Economy Gets Harder*, WALL ST. J., July 18, 2002, at A1 ("Rapid changes in technology can produce more booms and busts. Technological change increases uncertainty about the future, and with more uncertainty comes NASDAQ-like bubbles and busts. The promise of technology creates tidal waves of euphoria that are followed by tidal waves of despondency when profits prove disappointing.") (comments of J. Bradford De Long, University of California at Berkeley).

84. See Yochi J. Dreazen, *FCC's Powell Quickly Marks Agency as His Own*, WALL ST. J., May 1, 2001, at A28 (describing views of Michael Powell, the Chairman of the FCC); Timothy J. Muris, *Antitrust Enforcement at the Federal Trade Commission: In a Word—Continuity*, Remarks at the ABA Antitrust Section Annual Meeting (Aug. 7, 2001), at <http://www.ftc.gov/speeches/muris/murisaba.htm> ("The fierce competition for success in these [high technology] industries often results in the winner enjoying a (perhaps short-lived) monopoly."). In *Microsoft III*, the District of Columbia Circuit Court opined on the fleeting nature of high technology monopolies: "In technologically dynamic markets, ... [monopoly] may be temporary, because innovation may alter the field altogether." 253 F.3d 34, 49 (D.C. Cir. 2001). In its proposed consent order in *Intel Corp.*, the FTC opined that "[t]he computer industry is characterized by short, dynamic product cycles, which are generally measured in months." [1997-2001 Transfer Binder] Trade Reg. Rep. (CCH) ¶ 24,575, at 24,482 (Aug. 3, 1999).

85. See Sullivan, *supra* note 28, at 1225 (describing the price that yields "the highest short run monopoly profit, but also does the most to attract entry"); see also Holstein, *supra* note 35, at 5 ("Nobody works any harder than they have to .... If you have the right widget and everyone comes to you, you get lazy.") (quoting John Steele Gordon). James Utterback has compared high technology competition to the game of Chutes and Ladders: "A player may arrive at the bottom of a ladder, and then rapidly ascend to a higher level and obtain higher stakes. The converse is also true ...." Teece & Coleman, *supra* note 10, at 804.

86. See Teece & Coleman, *supra* note 10, at 824 (describing the high technology business cycle).

twentieth-century Austrian economist, called this process, in which market power rises and falls, "creative destruction."<sup>87</sup>

Bill Gates recently explained how creative destruction can operate in high technology markets. High technology firms derive their primary value from intellectual property such as computer software. Upfront costs to create intellectual property are high, but once the product has been developed, the marginal costs of producing and selling each additional unit approach zero. According to Gates, this makes high technology monopolies particularly vulnerable to competition:

With intellectual property, the upfront costs are what it's all about.... Say a piece of software costs \$10 million to create and the marginal costs, because it's going to be distributed electronically, are basically zero. Once the costs of development have been recouped, every single additional unit is pure profit. But if someone comes along with a significantly superior product, your demand can literally almost drop to zero.<sup>88</sup>

Commentators emphasizing the phenomenon of creative destruction have, however, overlooked the extent to which monopolies can become entrenched in high technology markets. Indeed, a combination of natural and artificial barriers to entry often makes it impossible for new firms to enter such markets. If the courts can do nothing about the natural barriers to entry, they should at least eliminate the artificial ones.

Once they have obtained monopoly power, firms can attempt to extend the duration of such power by various types of exclusionary conduct, such as access restrictions, exclusive dealing, and

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87. SCHUMPETER, *supra* note 81, at 83; *see also* David A. Balto, *Emerging Antitrust Issues in Electronic Commerce*, 19 J. PUB. POLY & MKTG. 277, 278 (Fall 2000) (stating that high technology markets "may not be conducive to long-term market dominance by a single firm"); Balto & Pitofsky, *supra* note 43, at 585 (stating that when "product generations are measured in only a few years and whole new industries can be created at any time," it is difficult for firms to retain a market power advantage for a significant period); Leonhardt, *supra* note 32, at 13 (arguing that investments in high technology markets "can turn sour within years, or even months").

88. Murray, *supra* note 6, at A1 (quoting Bill Gates). In good times, sales exceed high technology firms' fixed costs, but when sales decline, companies' profits also decrease quickly, as they are unable to cover their enormous fixed costs. For example, it costs Amazon.com, in good times and bad, \$50 to \$100 million a year to maintain its website. *Ip*, *supra* note 65, at A10.

predatory pricing.<sup>89</sup> High technology monopolists have a particular incentive to extend their monopoly power through such practices.<sup>90</sup> Because of low marginal costs, most of the incremental revenues earned by high technology monopolists “go directly to the bottom line.”<sup>91</sup> Thus, the profits earned by extending a high technology monopoly often exceed the costs of the exclusionary practices required to achieve the extension.<sup>92</sup>

High technology monopolies also possess inherent natural advantages that make them difficult to dislodge.<sup>93</sup> High technology markets tend to reinforce the market power of the first firm to commercialize a new technology. More often than not, such markets vest a durable form of monopoly power in such “first-movers.” The first-mover advantage is evident in the market for computer operating systems, where Microsoft has been able to perpetuate its monopoly power by taking advantage of what Judge Jackson, in his district court decision in *Microsoft III*, termed the “applications barrier to entry.”<sup>94</sup> With over ninety percent of the computer operating system market,<sup>95</sup> Microsoft has an installed base which encourages independent software vendors to write compatible programs for applications such as databases, games, spreadsheets, word processing, electronic mail, and Internet browsers.<sup>96</sup> This installed base makes it difficult, if not impossible, for other operating systems to enter the market. Programmers do not want to spend a lot of time and money developing applications for

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89. See *infra* notes 166-245 and accompanying text.

90. See Posner, *supra* note 20, at 935 (calling the period during which a high technology monopoly is extended by exclusionary practices “the extension period”).

91. *Id.* Another commentator has described how low marginal costs affect movie studios and pharmaceutical companies: “If it’s a hit, the profit potential is immense, since it costs little to make more copies of the film or drug.” *Ip*, *supra* note 65, at A10.

92. Posner, *supra* note 20, at 935; see also Rubinfeld, *supra* note 33, at 862 (explaining that network monopolists “have an incentive to adopt competitive strategies” that exclude rivals).

93. See FTC STAFF REPORT, *supra* note 17, Part 3, at 29 (“[O]nce a marketplace monopoly is attained, it may be very difficult to dislodge.”).

94. *Microsoft III*-Findings of Fact, 84 F. Supp. 2d 9, 20 (D.D.C. 1999). Judge Jackson then asserted that the “fact that a vastly larger number of applications are written for Windows than for other PC operating systems attracts consumers to Windows, because it reassures them that their interests will be met as long as they use Microsoft’s product.” *Id.*

95. See *id.* at 19 (finding that Microsoft’s share of the market for “Intel-compatible PC operating systems” is at ninety percent).

96. See *Microsoft II*, 147 F.3d 935, 938 (D.C. Cir. 1998) (referring to such compatible programs).



operating systems that do not have a large installed base, because demand for such applications is low. Thus, Windows users are unlikely to switch to other systems, because Windows allows them to choose from among a much larger number of compatible applications.<sup>97</sup> Because the "switching costs" for consumers in network markets are so high, they are, in a very real sense, "locked in" to their current network.<sup>98</sup> The result is a "positive feedback" process in which more and more applications are written for a dominant operating system such as Windows. Consumers are then even more attracted to the system because of its compatibility with so many applications. "This, in turn, encourages more developers to write programs, which attracts more customers, and so on."<sup>99</sup>

The phenomenon of "sunk costs" also creates substantial barriers to entry in high technology markets. Consumers are likely to remain with an established network because of the costs they have incurred in adapting to the network. Even if a new entrant promises a less expensive or technically superior product, users of the current network may not be willing to run the risk of losing their investments in that network. This consequence is sometimes referred to as "path dependency."<sup>100</sup> Users of Microsoft's Windows operating system, for example, may be unwilling to switch to Apple's operating system out of a concern that they will have to learn new programming procedures. Similarly, participants in a particular B2B may be reluctant to switch to another B2B because of the substantial investments already made in integrating their information technology systems with the current B2B.<sup>101</sup>

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97. See Teece & Coleman, *supra* note 10, at 814 ("[T]he more users of a given [computer operating] platform, the more complementary products that will likely be supplied to that platform. This will lower the cost or increase the value of the platform.").

98. See Lopatka & Page, *supra* note 36, at 170 ("Software vendors tend to write applications for the most popular operating system. The greater availability of applications in turn induces new users to choose that operating system. The market thus tips in favor of a single standard, to which the industry is locked in.").

99. Thomas A. Piraino, Jr., *An Antitrust Remedy for Monopoly Leveraging by Electronic Networks*, 93 NW. U. L. REV. 1, 17 (1998).

100. See Posner, *supra* note 20, at 930 (explaining "the issue of 'path dependence': an industry may be stuck with an inferior technology because of the cost advantage of the existing network").

101. According to the *FTC Staff Report*:

One workshop panelist [at the hearings on the *FTC Staff Report*] observed that large companies will not readily switch from one B2B to another 'because they have to invest hundreds of thousands of dollars to do the integration' by

Consumer expectations may also play a significant role in extending the duration of a high technology monopoly. In order to be successful, a new network must convince a large number of the installed base of users to migrate from the incumbent network. In a classic "chicken-and-egg" problem, users may not be willing to take a chance on a new network if they do not believe that it will be successful.<sup>102</sup> With its large subscriber base, an Internet service provider such as AOL Time Warner is likely to retain its market power advantage even "in the face of attempted entry by seemingly superior products."<sup>103</sup> Firms will find it difficult to enter the national ATM market unless they can demonstrate that "a substantial number of transactions and cardholders within the market will be available on a long-term basis."<sup>104</sup>

Durable monopolies may lock consumers into technologically inferior networks for a considerable period of time.<sup>105</sup> Only a major

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hooking their net marketplace[s] into the back-end systems of the buyers and sellers, [i.e.] into their supply chain and ERP systems[;] once that is done, it's very hard for a buyer to move to a different location without redoing the whole thing over again.

FTC STAFF REPORT, *supra* note 17, Part 1, at 24.

102. See Microsoft III, 253 F.3d 34, 55 (D.C. Cir. 2001) (describing how consumers' preference for a computer operating system "for which a large number of applications have already been written" creates a "chicken-and-egg" situation [which] ensures that applications will continue to be written for the already dominant Windows, which in turn ensures that consumers will continue to prefer it over other operating systems"); *United States v. VISA U.S.A., Inc.*, 163 F. Supp. 2d 322, 342 (S.D.N.Y. 2001) (referring to difficulties facing new entrants to the credit card market, who must "solve the so-called 'chicken-and-egg' problem of developing a merchant acceptance network without an initial network of cardholders who, in turn, are needed to induce merchants to accept the system's cards in the first place"); Melamed, *supra* note 41, at 150 (describing entrants' "daunting chicken-and-egg problem in attempting to coordinate behavior by large numbers of users and suppliers in order to take advantage of potential network benefits").

103. Balto, *supra* note 87, at 279.

104. Balto, *supra* note 51, at 822.

105. See John E. Lopatka & William H. Page, *Microsoft, Monopolization, and Network Externalities: Some Uses and Abuses of Economic Theory in Antitrust Decision Making*, 40 ANTITRUST BULL. 317, 336 (1995) (explaining how consumers can become "locked in" to technologically inferior products); Sheremata, *supra* note 1, at 954 ("[T]here is every reason to believe that consumers will get 'locked into' the first product that appears on a new platform, even when the product is technologically inferior."); see also Lopatka & Page, *supra* note 36, at 169 ("In theory, a market may tip toward an inferior product. Consumers may initially adopt a product because it has a greater inherent benefit to them than the other product then available. Such a good may gain a first-mover advantage, which may then be reinforced by positive feedback.").

paradigm shift will convince users to abandon such a network.<sup>106</sup> The promise of mere incremental improvements to the network will usually not be sufficient to induce a move to a new provider.<sup>107</sup> The only new networks likely to be successful are those that promise revolutionary change.<sup>108</sup> Thus, in high technology markets, network effects may deny consumers the benefit of technological improvements that, in traditional industrial markets, would be sufficient to induce entry by new firms.

## II. THE ECONOMIC EFFECTS OF HIGH TECHNOLOGY JOINT VENTURES

High technology firms can exert market power not only by acquiring individual dominance but also by entering into various types of collaborations with their competitors. Such "joint ventures" are a unique form of business organization which require their own antitrust approach. If the various forms of business organization were classified along a continuum, joint ventures would lie at the midpoint between cartels<sup>109</sup> and mergers. Joint ventures are distinguished by partial integration. They are more integrated than cartels but less integrated than mergers. Joint ventures are further

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106. See Teece & Coleman, *supra* note 10, at 811 (observing that "that which is ahead tends to stay ahead, until interception by a major paradigm shift"). "Only occasionally will a new product induce customers to abandon the old standard en masse, sparking a new standards competition and eventually a tip to a new standard." Lemley & McGowan, *supra* note 45, at 723.

107. See Balto & Pitofsky, *supra* note 43, at 590 ("If the installed base of the old network accounts for a very significant portion of prospective users, the new network must offer even greater technological advantages and utility over the older network to succeed in the marketplace.").

108. Vacuum tube manufacturers, for example, "could not have stemmed the tide of the transistor, no matter how hard they might have tried." Teece & Coleman, *supra* note 10, at 813.

109. In a cartel, competitors do not combine their resources or share risks in any manner. They simply coordinate their competitive conduct. Cartels are completely unintegrated arrangements. Consider a price-fixing cartel, in which the participants do not combine sales forces or production facilities to achieve cost savings but merely engage in parallel pricing and production policies. Such arrangements have been deemed illegal on their face because they have no potential to generate any economic efficiencies. Their only effect is to eliminate competition. See Gregory J. Werden, *Antitrust Analysis of Joint Ventures: An Overview*, 66 ANTITRUST L.J. 701, 712 (1998) ("If two competitors formed a venture that did nothing but set their prices, the arrangement would be nothing more than a price-fixing cartel, and it would be treated as such under the antitrust laws.").

distinguished from cartels by their procompetitive purpose. In a joint venture, partners integrate their resources for a specific efficiency objective, such as the production or marketing of a new product. The efficiencies created by joint ventures are similar to those resulting from mergers. Through their collaboration, the partners in a joint venture often can produce a product which none of the partners could have produced on their own.<sup>110</sup> Yet joint ventures also differ from mergers. Unlike mergers, they do not involve a complete integration of the partners' operations. Each of the members of a joint venture continues its separate existence and continues to compete with its partners outside the scope of the venture. Thus, joint ventures are less restrictive of competition than mergers.<sup>111</sup> For example, Microsoft and AOL Time Warner have collaborated in the past, agreeing to place AOL Time Warner's icon on the Windows desktop in exchange for AOL Time Warner's agreement to use Microsoft's Internet browser. Such cooperation, however, has not diminished the companies' competition in areas ranging from instant messaging to Internet access. Nor did it deter AOL Time Warner from filing its recent monopolization case against Microsoft. As an AOL Time Warner spokeswoman recently stated, "Microsoft is both our competitor and at times our partner."<sup>112</sup>

The integration that occurs in a joint venture is capable of generating both beneficial and adverse economic effects. Any effective antitrust approach must be capable of distinguishing between these two aspects of collaboration among competitors.

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110. See *infra* notes 114-15 and accompanying text.

111. See *Antitrust Guidelines for Collaborations Among Competitors*, 4 TRADE REG. REP. (CCH) ¶ 13,161 (Apr. 7, 2000) [hereinafter *Collaboration Guidelines*]; *id.* ¶ 20,853 ("Most mergers completely end competition between the merging parties in the relevant market(s). By contrast, most competitor collaborations preserve some form of competition among the participants.")

112. Allison Linn, *Tech Titans Uneasy Partners*, CLEV. PLAIN DEALER, June 12, 2001, at 1-C. Indeed, Microsoft has identified AOL Time Warner as "its newest and biggest competitor." Rebecca A. Buckman, *With its Old Playbook, Microsoft is Muscling into Big Web Markets*, WALL ST. J., June 29, 2001, at A1. For a discussion of the intense competition between Microsoft and AOL Time Warner for new Internet applications such as instant messaging, see *infra* notes 198-202 and accompanying text.

### A. *Beneficial Competitive Effects*

Joint ventures allow their partners to penetrate markets they could not have entered on their own. Indeed, some courts have emphasized that the distinguishing characteristic of a joint venture is its "capability in terms of new productive capacity, new technology, a new product, or entry into a new market."<sup>113</sup> A high technology joint venture facilitates market entry by reducing the risks of investing in new products. Firms are often unwilling to make such investments on their own because of short product life cycles, the difficulties in predicting the next product that will be popular with consumers, and the likelihood that only one or a very few firms ultimately can succeed in a particular market.<sup>114</sup> Joint ventures, however, mitigate such risks by allowing firms to share the costs of entering a high technology market. If a firm guesses incorrectly on the ultimate success of a new technology, it will incur only a fraction of the losses it would have suffered if it had attempted to enter the market on its own. Even relatively large companies have formed joint ventures to share the costs of developing high technology products. Computer manufacturers, for example, have entered into joint ventures to construct new computer chip factories, which can cost as much as \$500 million.<sup>115</sup>

A joint venture can bring together complementary technologies that allow it to produce a new product that none of its partners could have produced on their own. AT&T and Nippon Electric Corporation (NEC) entered into a joint venture to produce computer chips using AT&T's computer-aided design technology and NEC's technology for advanced logic chips.<sup>116</sup> Fujitsu and McDonnell Douglas have established a joint venture for factory automation products to which Fujitsu contributed computer hardware and

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113. *Compact v. Nashville County, Tenn.*, 594 F. Supp. 1567, 1574 (M.D. Tenn. 1984); see also Joseph F. Brodley, *Analyzing Joint Ventures with Foreign Partners*, 53 ANTITRUST L.J. 73, 75 (1984) (stating that a joint venture "involves the creation of a new product or entry into a new market—or ... 'new competitive dimension.'").

114. See *supra* notes 31-38 and accompanying text.

115. Joel B. Eisen, *Antitrust Reform for Production Joint Ventures*, 30 JURIMETRICS J. 253, 264 (1990).

116. Bernard Wysocki, Jr., *Cross-Border Alliances Become Favorite Way to Crack New Markets*, WALL ST. J., Mar. 26, 1990, at A1.

McDonnell Douglas contributed software systems.<sup>117</sup> Complex alliances among telecommunications, computer hardware and software, and consumer electronics industries resulted in the development of “[o]ne of the most recent technology products for the mass market, the personal digital assistant.”<sup>118</sup> An alliance among IBM, Apple Computer, and Motorola produced the Power PC microprocessor, and Microsoft’s relationship with Intel created the “Wintel” standard operating technology in most personal computers.<sup>119</sup>

Joint ventures also have beneficial effects in markets for current products. By combining their resources, the partners can enhance their efficiency in producing or marketing products in which they previously competed. A joint venture, for example, may combine one partner’s manufacturing capabilities with another partner’s marketing strengths.<sup>120</sup> Joint ventures among current competitors also allow their partners to achieve economies of scale, eliminate redundancies, and reduce costs. The major automobile companies recently entered into an e-commerce joint venture called “Covisint,” which will reduce costs in “virtually every aspect of designing, manufacturing, and supplying automobiles.”<sup>121</sup> The major airlines’ joint venture for the sale of tickets over the Internet, “Orbitz,” will allow them to market their services directly to consumers, thus eliminating commissions and fees for travel agents.<sup>122</sup>

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117. Jacob M. Schlesinger, *Fujitsu, McDonnell Douglas to Unveil Alliance in Factory Automation Field*, WALL ST. J., Jan. 28, 1991, at B3.

118. Julie Flaherty, *The Corporate Alliance, as a Tightrope Act*, N.Y. TIMES, June 10, 2001, § 3 (Money & Business), at 4.

119. *Id.*

120. A joint venture between General Motors and Toyota for the production of a compact car in Fremont, California allowed the parties to combine Toyota’s manufacturing techniques with General Motors’ knowledge of the U.S. marketplace. Jeremy Main, *Making Global Alliances Work*, FORTUNE, Dec. 17, 1990, at 121, 126.

121. Thomas O. Barnett & Michael J. Fanelli, *B2B’s: The Next Generation*, Presentation at 49th Annual Spring Meeting of ABA Section of Antitrust Law 2 (Mar. 28-30, 2001) (on file with author).

122. Marilyn Geewax, *Orbitz Ready for Launch*, CLEV. PLAIN DEALER, April 28, 2001, at 1-C; Saul Hansell, *Web Sales of Airline Tickets are Making Hefty Advances*, N.Y. TIMES, July 4, 2001, at A1; Professor Jerry A. Hausman, Remarks at the 49th Annual Spring Meeting of the ABA Antitrust Section 6 (Mar. 28-30, 2001) (on file with author).

### *B. Adverse Competitive Effects*

Joint ventures can also have adverse competitive effects. Joint ventures covering products which the parties are already producing will eliminate competition that otherwise would have occurred among the partners.<sup>123</sup> That is because the partners will, in the natural course, refrain from competing with a venture in which they have a financial interest. Such competition would, after all, only reduce the profits which the partners could obtain from the venture. Instead of competing, the partners will cooperate with each other to maximize the joint venture's returns. Partners in downstream production and marketing joint ventures, for example, may limit the output and raise the price for the venture's products above the level that would prevail in a competitive market.

The amount of competition eliminated by a joint venture is entirely dependent upon the breadth of the parties' collaboration. A joint venture only eliminates competition within the limited scope of its activities. Because joint ventures involve only a partial integration of the parties' resources, they do not prevent the parties from continuing to compete in other areas. Thus, if a joint venture covers an area in which the parties are not currently competing, it can have no adverse effects. No current competition among the parties will be eliminated under such circumstances. If the parties are already competing in other areas, they should continue to do so, regardless of the joint venture. Microsoft and AOL Time Warner, for example, might enter into a joint venture to design and develop a new software system for air traffic control, a market in which neither of the companies is currently involved. Their cooperation in such a joint venture should not prevent them from continuing to compete in other areas, such as the emerging market for instant messaging systems.<sup>124</sup>

In certain cases, even joint ventures which combine the parties' market power may be incapable of causing any adverse effects. A joint venture, for example, may be confined to research and

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123. See *United States v. Penn-Olin Co.*, 378 U.S. 158, 165-67, 173-74 (1964) (finding that a joint venture between potential competitors could have eliminated competition in violation of antitrust laws).

124. For a description of the continuing competition between Microsoft and AOL Time Warner, see *infra* notes 198-202 and accompanying text.

development, standards-setting, or the purchasing of raw materials. Ventures at such "upstream" levels of the production process do not affect prices or output, which are the prime determinants of consumer welfare. Regardless of the market power of their partners, joint ventures cannot control the amount of goods produced or prices charged to consumers when they are removed from the downstream production and marketing stages at which such decisions are made.

### III. A PROPOSED APPROACH TO HIGH TECHNOLOGY COMPETITION

The foregoing discussion reveals that, in high technology markets, regulators need not be unduly concerned with increased levels of market concentration associated with monopolies or joint ventures. Higher prices and decreased innovation are not the inevitable result of such arrangements. Indeed, more often than not, high technology monopolies and joint ventures benefit consumers. Most high technology firms and joint ventures become more efficient, and more useful to their customers, as they grow in size. Individual firms and joint ventures usually achieve market power in high technology markets because they have won the race to develop the most efficient network standard. Thus, the mere possession of market power by a high technology firm or joint venture should not be illegal. To punish a firm simply because it has achieved a dominant position in its market is to discourage efficient business performance. As Judge Hand pointed out in *ALCOA*, "The successful competitor, having been urged to compete, must not be turned upon when he wins."<sup>125</sup>

The problem with high technology monopolies and joint ventures stems not from their achievement of market power but from their misuse of it. The natural barriers to entry in high technology markets ensure that market power, once attained, will be long-lasting. The courts should not allow high technology firms and joint ventures to perpetuate their market power even further through exclusionary conduct. Because of their low marginal costs and high profit margins, high technology firms have a substantial incentive to engage in conduct that will artificially extend the duration of

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125. *United States v. Aluminum Co. of America*, 148 F.2d 416, 430 (2d Cir. 1945).



their market power. The rewards of prospective monopoly profits may, for example, induce firms to implement predatory pricing policies that deter rivals from entering a monopolized market. Firms may also be willing to impose onerous access restrictions or exclusive dealing arrangements on their customers. Firms incur short-term costs under such circumstances. Predatory pricing sacrifices profit margins, access restrictions turn away potential customers, and exclusive dealing unnecessarily alienates customers. High technology firms, however, are often willing to incur such costs in order to obtain the long-term benefit of excluding rivals from the relevant market. Thus, in high technology markets, improper competitive conduct can be defined as *behavior that makes no economic sense other than as a means of extending or perpetuating market power*.

In reviewing high technology monopolies and joint ventures, the courts should focus on the purpose of defendants' conduct rather than the structure of their business or of the markets in which they operate. In most high technology monopoly cases, the proper remedy will not be to break up the defendant, but to ensure that it refrains from any conduct that has no rational purpose other than to perpetuate or extend its monopoly power. Similarly, in the case of high technology joint ventures, the courts should review the conduct of the venture and its partners to determine whether they are attempting to expand the scope of their collaboration beyond its legitimate bounds. If such conduct is overly restrictive of competition, the courts can prohibit it without precluding the entire joint venture. The parties would be free to proceed with their collaboration and to obtain the advantage of the resulting efficiencies as long as they ceased the offending conduct.

Such a conduct-based approach will allow the courts to more effectively regulate high technology competition. Although judges and juries are adept at determining "who did what, when and why,"<sup>126</sup> they are ill-equipped to decide economic issues. They lack the sophisticated economic training necessary to know the extent to which a particular monopoly or joint venture promotes efficiencies, on one hand, or raises prices, limits output, and retards

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126. Mark Crane, *The Future Direction of Antitrust*, 56 ANTITRUST L.J. 3, 15 (1987).

innovation, on the other.<sup>127</sup> Indeed, economists themselves cannot agree on the economic impact of many types of business conduct. If economists cannot effectively evaluate the market effects of particular competitive practices, certainly judges and juries cannot be expected to do so.<sup>128</sup>

Courts are, however, adept at judging the purpose of defendants' conduct. Every day fact finders are expected to apportion liability based on the purpose of defendants' behavior in contract, tort, and criminal disputes. The argument for a purpose-based approach is just as strong in antitrust cases. The courts have recognized that "motive and intent play leading roles" in antitrust litigation.<sup>129</sup> As Justice Stevens pointed out in *Business Electronics Corp. v. Sharp Electronics Corp.*, "in antitrust, as in many other areas of the law, motivation matters and factfinders are able to distinguish bad from good intent."<sup>130</sup> Indeed, in most instances, a defendant's purpose for engaging in particular conduct should reveal its likely impact on competition. In *Broadcast Music, Inc. v. CBS (BMI)*,<sup>131</sup> for example, the Supreme Court stated that a defendant's purpose for a restraint "tends to show [its] effect."<sup>132</sup> The next two sections explain how the

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127. *United States v. Topco Assocs., Inc.*, 405 U.S. 596, 609-12 (1972) ("[C]ourts are of limited utility in examining difficult economic problems .... [They are] ill-equipped and ill-situated for such decision making [and cannot] analyze, interpret, and evaluate the myriad of competing interests and the endless data that would surely be brought to bear on such decisions."); see also *Arizona v. Maricopa County Med. Soc'y*, 457 U.S. 332, 343 (1982) ("Judges often lack the expert understanding of industrial market structures and behavior to determine with any confidence a practice's effect on competition.").

128. See Frank H. Easterbrook, *Vertical Arrangements and the Rule of Reason*, 53 ANTITRUST L.J. 135, 153 (1984) ("If you assembled 12 economists and gave them all available data about a business practice, plus an unlimited computer budget, you would not soon (or ever) get unanimous agreement about whether the practice promoted consumers' welfare or economic efficiency more broadly defined."). As Professor Sullivan has concluded, "economics does not comprehend enough and law, without extreme transformations in its own structure, cannot adequately deal with all that economics does comprehend." LAWRENCE A. SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST § 2, at 10 (1977).

129. *Poller v. Columbia Broad. Sys., Inc.*, 368 U.S. 464, 473 (1962).

130. 485 U.S. 717, 754 (1988) (Stevens, J., dissenting) (citing *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 610-11 (1985); see also *McLain v. Real Estate Bd.*, 444 U.S. 232, 243 (1980); *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 224-26 n.59 (1940); *Chicago Bd. of Trade v. United States*, 246 U.S. 231, 238 (1918); Thomas A. Piraino, *The Case for Presuming the Legality of Quality Motivated Restrictions on Distributions*, 63 NOTRE DAME L. REV. 1, 4, 16-19 (1988)).

131. 441 U.S. 1 (1979).

132. *Id.* at 19. In *White Motor Co. v. United States*, 372 U.S. 253 (1963), the Court referred to the relevance of defendants' motives. *Id.* at 256-59. One court has concluded that in all

courts can use such a purpose-based approach to analyze the antitrust implications of high technology monopolies and joint ventures.

#### IV. APPLYING THE PROPOSED APPROACH TO HIGH TECHNOLOGY MONOPOLIES

##### *A. Precluding Firms From Extending or Perpetuating Monopoly Power*

Dominant firms may misuse their monopoly power by (1) extending their market power from the monopolized market to a related market, or (2) perpetuating the duration of their power in the monopolized market itself. There are myriad ways in which a firm can perpetuate or extend its monopoly power, and the courts have found it difficult to distinguish between the legitimate and illegal means of doing so. As commentators have noted, "aggressive *competitive* conduct by a monopolist, which is beneficial to consumers, and aggressive *exclusionary* conduct by a monopolist, which is deleterious to consumers, look alike."<sup>133</sup> Some courts have held that monopolists should not be liable for monopoly power acquired "as a consequence of a superior product ... [or] business acumen ...."<sup>134</sup> Other courts, however, have found monopolists liable for conduct resulting simply from their development of a product or

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cases alleging an illegal group boycott under Section 1 of the Sherman Act, "the touchstone of *per se* illegality has been the purpose and effect of the arrangement in question." *E.A. McQuade Tours, Inc. v. Consol. Air Tour Manual Comm.*, 467 F.2d 178, 187 (5th Cir. 1972), *cert. denied*, 409 U.S. 1109 (1973).

133. Roger D. Blair & Amanda K. Esquibel, *Some Remarks on Monopoly Leveraging*, 40 ANTITRUST BULL. 371, 372 (1995).

134. *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966); *see also* *California Computer Prods., Inc. v. IBM Corp.*, 613 F.2d 727, 742 (9th Cir. 1979) ("[IBM] was entitled to maintain its ... dominant position in the market ... through 'business acumen' .... Where the opportunity exists to increase or protect market share profitably by offering equivalent or superior performance at a lower price, even a virtual monopolist may do so."); *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 281 (2d Cir. 1979) ("[A] monopolist is permitted, and indeed encouraged, by [Section] 2 to compete aggressively on the merits ...."); *Telex Corp. v. IBM Corp.*, 510 F.2d 894, 927 (10th Cir. 1975) ("[T]echnical attainments [by a monopolist] were not intended to be inhibited or penalized by a construction of Section 2 of the Sherman Act to prohibit the adoption of legal and ordinary marketing methods already used by others in the market ....").

service especially attractive to consumers.<sup>135</sup> The proposed approach would resolve such inconsistencies by concentrating on the purpose of defendants' conduct. Under this approach, the courts would permit conduct designed to enhance a high technology firm's efficiency while precluding conduct intended only to perpetuate or extend a firm's monopoly power.

Because monopoly power so often is inevitable in high technology markets, the courts must ensure that the initial battle to obtain monopoly power is undertaken freely and fairly.<sup>136</sup> Otherwise, consumers cannot be assured that the most efficient competitor ultimately will prevail. As Judge Posner recently stated, "competition to *obtain* a [high technology] monopoly is an important form of competition."<sup>137</sup> Firms will not be willing to engage in such competition at the beginning of a high technology product cycle if they believe that their rivals can gain an unfair competitive advantage. Thus, the courts should preclude monopolists from extending the power they have already acquired in the monopolized market into a related market in which the struggle for dominance is just beginning. Such conduct unduly raises barriers to entry for potential competitors. Potential competitors, for example, may decline to invest in the emerging instant messaging market if they fear that Microsoft can leverage its monopoly power into that market by precluding their programs from access to the Windows operating system.<sup>138</sup>

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135. For example, in *Aspen Skiing*, the Supreme Court considered the Section 2 liability of a ski resort which had obtained control, by proper means, over three popular ski slopes near Aspen, Colorado. The Court found the resort liable for failing to cooperate with a competing resort in marketing a multi-mountain ticket, considered uniquely desirable to consumers. *Aspen Skiing*, 472 U.S. at 610-11. Under the *Aspen* standard, a monopolist's duty to deal with its competitors arguably would increase in direct proportion to the popularity of its products.

136. "[I]f monopolization is inevitable, then the main basis for criticizing an outcome is that the market anointed the wrong monopolist." Teece & Coleman, *supra* note 10, at 812.

137. Posner, *supra* note 20, at 929.

138. "Instant messaging allows users to track which friends or family members are online and shoot them strings of text that pop up instantly on their screens .... The technology, once limited to a young, chat-happy audience, promises to become one of the most significant new platforms for communications." Rebecca Buckman & Julia Angwin, *Battle to Control Internet Centers on Access, E-Mail*, WALL ST. J., June 19, 2001, at B1. Several firms, including AOL Time Warner, Microsoft, and Yahoo!, are vying to develop a system that will become the dominant standard in the market. In fact, Microsoft has bundled its instant messaging system into the newest version of its operating system, Windows XP, and AOL Time Warner

Firms can also misuse their monopoly power to exclude competitors from the monopolized market itself. Many high technology monopolists already possess a durable form of market power, and they should not be permitted to artificially extend the period of their dominance.<sup>139</sup> The courts must be particularly alert to exclusionary conduct by high technology monopolists, because first-mover advantages give such firms a unique incentive and ability to perpetuate their monopoly power beyond its natural period.<sup>140</sup> Exclusionary practices allow high technology monopolists to insulate themselves from the natural forces of creative destruction that ultimately mitigate most firms' market power. If they are allowed to erect such artificial barriers to entry, such monopolists will have little incentive to reduce their prices on a long-term basis or to introduce product innovations attractive to consumers.<sup>141</sup>

Hence, the courts should preclude high technology monopolists from engaging in conduct that makes no economic sense other than as a means of perpetuating their power in a current market or extending such power into a new market.<sup>142</sup> Such a standard would

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has vigorously protested Microsoft's integration plans. Buckman, *supra* note 112, at A1. For a discussion of such bundling, see *infra* notes 194-97 and accompanying text.

139. One commentator, for example, has pointed out that Microsoft should be precluded from erecting artificial barriers to entry in the market for computer operating systems:

There are indeed substantial natural barriers that stand in the way of any would-be challenger to Microsoft, and which the laws do not make the subject of legal challenge. But the existence of those substantial *natural barriers* to entry makes it all the more necessary to eliminate the *artificial barriers* that Microsoft erected.

Sheremata, *supra* note 1, at 963.

140. See *supra* notes 93-94 and accompanying text. As the plaintiffs pointed out in their brief to the District of Columbia Circuit Court in *Microsoft III*, "[N]etwork effects give[] a software monopolist both the means and a strong incentive to use predatory product design with devastating effectiveness." Brief for Appellees at 68, *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) (Nos. 00-5212, 00-5213), available at <http://www.usdoj.gov/atr/cases/f7400/7425.pdf>.

141. See Teece & Coleman, *supra* note 10, at 825 ("[A] monopolist would be a firm shielded from entry, i.e., insulated from competition and from other innovators and imitators. The monopolist could stay ahead without innovating or lowering prices.").

142. See *William Inglis Baking Co. v. ITT Cont'l Baking Co.*, 668 F.2d 1014, 1030-31 (9th Cir. 1981) (analyzing claim of attempted monopolization according to whether it "makes sense only because it eliminates competition"); Robert Bork, *THE ANTITRUST PARADOX* 137-44 (1993) (proposing that conduct be deemed illegal if the conduct only made economic sense if it were to result in a monopoly and monopoly profits); Teece & Coleman, *supra* note 10, at 836 (defining anticompetitive conduct as "conduct that makes no sense without the monopoly

preserve a monopolist's right to engage in legitimate competitive conduct that increases its sales and profits. A monopolist would be allowed to improve its products in ways that make them more attractive to consumers. Monopolists, however, would be precluded from competitive conduct solely intended to exclude actual or potential competitors. Unjustified denials of access to essential resources, exclusive dealing, and predatory pricing cause monopolists to incur costs—either in lost profits or customer goodwill—that can be recouped only if the monopolist succeeds in driving rivals from the monopolized market or from a related market to which it is attempting to extend its market power. Once a court determines that but for such purpose, a monopolist would not engage in particular conduct, it can condemn the behavior without fear of deterring legitimate competitive actions.

The following subsections explain how the courts can use this new approach to analyze the primary means by which high technology monopolists perpetuate or extend their market power.

## *B. Tying Arrangements*

### *1. The Courts' Confused Approach to Tying*

A firm may engage in monopoly leveraging by “tying” the purchase of a secondary product (the tied product) to a monopolized product (the tying product).<sup>143</sup> By requiring customers to purchase both products, the monopolist can extend its market power from the tying to the tied product market. For example, in the 1970s, the FTC claimed that Xerox Corporation attempted to leverage its monopoly in the photocopier market into the market for toner and developing supplies used in photocopying machines. A 1975 consent order prohibited Xerox from requiring its customers to buy such supplies from it when they purchased photocopying machines.<sup>144</sup>

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profits that can be made after competition is eliminated or reduced”).

143. See *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5-7 (1958) (affirming summary judgment finding that the defendant railroad company illegally tied sales or leases of real estate to commitment to ship commodities on defendant's system).

144. See *In re Xerox Corp.*, 86 F.T.C. 364 (1975) (requiring Xerox to refrain from certain actions that would cause customers to purchase toner and developing supplies as well as copiers from Xerox).

A tying approach is a particularly ill-suited means of judging the behavior of many high technology monopolists. Tying liability is appropriate when a monopolist requires a consumer to purchase two distinct products, such as a camera and film, or a photocopier and developing supplies. Tying doctrine, however, cannot account for the complexities of integrating a previously separate high technology product into a larger whole. Many high technology cases have involved "technological tying," in which monopolists integrate components into a single package, thereby making competitors' components unnecessary because their functions are performed internally by the packaged product. In cases brought against IBM, Kodak, and other high technology companies, the courts have found it difficult to determine whether, after such integration, the combined components should be considered separate products, illegally tied together, or simply a single new unit.<sup>145</sup> Recent decisions by the district court and circuit court in *Microsoft III* have only further confused the application of tying doctrine to high technology products.

In *Microsoft III*, the government claimed that the company illegally tied its Internet browser to its operating system by failing to make available a version of Windows without the Microsoft browser. Microsoft's conduct allegedly made it difficult for competing browsers, such as Netscape's Navigator, to compete against Microsoft's Web browser.<sup>146</sup> Microsoft's alleged motive for the tying arrangement was not simply to extend its monopoly power to the Web browser market but also to prevent Navigator from becoming its own platform for applications programs and thus, ultimately, to challenge Windows' hegemony in the operating

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145. See *Foremost Pro Color, Inc. v. Eastman Kodak Co.*, 703 F.2d 534, 543 (9th Cir. 1983) (declining to find per se unlawful tying arrangement by virtue of Kodak's bundling of "technologically interrelated" 110 Instamatic camera, film, and developing process); *California Computer Prods., Inc. v. IBM Corp.*, 613 F.2d 727, 744 (9th Cir. 1979) (concluding that when integration constitutes product "improvement" it cannot be the basis of an antitrust violation); *ILC Peripherals Leasing Corp. v. IBM Corp.*, 448 F. Supp. 228, 233 (N.D. Cal. 1978) (finding that IBM's integration of disk assembly into disk drive did not constitute illegal tying arrangement because it increased storage capacity of drive), *aff'd sub nom.*, *Memorex Corp. v. IBM Corp.*, 636 F.2d 1188 (9th Cir. 1980); *Telex Corp. v. IBM Corp.*, 367 F. Supp. 258, 342 (N.D. Okla. 1973) (finding that IBM's integrations "represented technological advancements" that could not "be fairly regarded as predatory within the contemplation of antitrust policy"), *rev'd on other grounds*, 510 F.2d 894 (10th Cir. 1975).

146. See *Microsoft III-Findings of Fact*, 84 F. Supp. 2d 9, 19 (D.D.C. 1999).

system market.<sup>147</sup> Microsoft argued that there could be no illegal tie because the browser had been integrated into the operating system and, therefore, did not constitute a separate product that could be tied to that system.<sup>148</sup> In his district court decision, however, Judge Jackson concluded that the browser and operating system should be viewed as separate products because there was separate consumer demand for each of them.<sup>149</sup> In Jackson's opinion, the company engaged in an illegal tying arrangement by integrating the browser into the operating system.<sup>150</sup>

In its decision on appeal, the District of Columbia Circuit Court came to a different conclusion. The court pointed out that Microsoft's integration of the browser into the operating system gave consumers the advantage of certain functions not available when the operating system and browser were offered as stand-alone products. The integrated product, for example, made the operating system "a better applications platform for third-party software."<sup>151</sup> Given the arguable technical advantages of integration, the court could not conclude that the operating system and Internet browser constituted separate products. The court's logical conclusion, then, should have been to dismiss the tying claim altogether for failure of proof of one of its essential elements. It is hard to understand how the circuit court could have concluded that Microsoft had engaged in any tying at all when the relevant products were not separate but merely parts of an integrated whole with more utility for consumers.<sup>152</sup> However, the court confused the issue by deciding that the plaintiffs could pursue the tying claim under the "rule of

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147. The term "middleware" has been used to describe software such as Netscape's Navigator Internet browser and Sun Microsystem's "Java" software, which have the capability to serve as platforms for the operation of applications programs. *See id.* at 17, 26, 28. As such software becomes capable of supporting a growing number of applications, it ultimately could compete with Microsoft's Windows program. *See id.* at 28, 29, 31.

148. *See* Microsoft III, 253 F.3d 34, 85, 88-89 (D.C. Cir. 2001) (describing Microsoft's arguments).

149. Microsoft III-Findings of Fact, 84 F. Supp. 2d 9, 48 (D.D.C. 1999); *United States v. Microsoft Corp.*, 87 F. Supp. 2d 30, 50 (D.D.C. 2000) [hereinafter Microsoft III-Conclusions of Law].

150. Microsoft III-Conclusions of Law, 87 F. Supp. 2d 30, 47-51 (D.D.C. 2000).

151. Microsoft III, 253 F.3d 34, 90 (D.C. Cir. 2001).

152. As the Brief for the Appellees in *Microsoft III* pointed out, "The only element of tying liability at issue is whether ... [Microsoft's browser] and Windows constitute separate products." Brief for Appellees at 43, Microsoft III, 253 F.3d 34 (D.C. Cir. 2001) (Nos. 00-5212, 00-5213), available at <http://www.usdoj.gov/atr/cases/f7400/7425.pdf>.



reason” rather than under the “per se rule.”<sup>153</sup> The court remanded the issue to the district court, where, to prevail under a rule of reason tying claim, the government would have to demonstrate that the anticompetitive effects of tying the browser to the operating system outweighed the procompetitive justifications for the arrangement.<sup>154</sup> Given the difficulties of prevailing under such a standard, the government subsequently decided to drop its tying claim in the district court action.<sup>155</sup>

## 2. Applying the Proposed Approach

If the circuit court had adopted the approach proposed in this Article, it simply could have asked whether Microsoft’s integration of its browser into Windows made any economic sense other than as a means of perpetuating Microsoft’s monopoly in the operating system market or extending that monopoly to the browser market. Such an inquiry into the purpose of Microsoft’s conduct would have avoided entirely the artificial distinction between single and separate products that has been so confusing in technological tying cases. A monopolist should not be liable for tying whenever it can show that it had a plausible efficiency motive for integrating a previously stand-alone product into a larger whole. There are many cases in which high technology monopolists integrate new elements of functionality into their products that are beneficial to consumers, and it is not appropriate for the courts to second guess such

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153. The rule of reason requires a plaintiff to prove that the adverse economic effects of a Section 1 restraint outweigh its procompetitive effects. The per se rule, on the other hand, merely requires the plaintiff to show that the defendant engaged in the relevant conduct. The anticompetitive nature of per se conduct is presumed without any additional evidence. See *infra* notes 261-65 and accompanying text.

154. *Microsoft III*, 253 F.3d 34, 95 (D.C. Cir. 2001). The circuit court’s decision on tying in *Microsoft III* was inconsistent with its own decision three years earlier in *Microsoft II*. In *Microsoft II*, the circuit court dismissed the government’s claim that Microsoft had violated an earlier consent decree by bundling its Internet browser with the Windows 95 operating system. Comparing the provisions of the consent decree to the requirements of tying law, the circuit court concluded that Microsoft should not be liable for integrating the browser with the operating system if it could make any “plausible claim” of benefit from the integration. *Microsoft II*, 147 F.3d 935, 950 (D.C. Cir. 1998). Nowhere in the opinion did the circuit court indicate that, in order to prevail, Microsoft should have to prove that the beneficial effects of the integration outweighed the adverse effects.

155. 81 ANTITRUST & TRADE REG. REP. (BNA) No. 2024 (Sept. 14, 2001), at 215.

decisions.<sup>156</sup> If the newly packaged product enhances performance or lowers cost, it should be permitted even if it was adopted in part to preclude competition.<sup>157</sup> It should be sufficient that a monopolist was spurred to some extent by a desire to improve its products. According to Professors Ordovery and Willig, “[I]f engineering data suggest that a new product is superior to the product it replaces, antitrust inquiry should end.”<sup>158</sup>

It is clear that Microsoft had a plausible efficiency motive for integrating its Web browser into Windows. Judge Jackson found in *Microsoft III* that “consumers can be said to benefit from Microsoft’s provision of Web browsing functionality with its Windows operating system at no extra charge.”<sup>159</sup> In fact, in its earlier decision in *Microsoft II*, the circuit court itself had pointed out that Microsoft did more than “metaphorically ‘bolt’ two products together,”<sup>160</sup> with the integration of the browser and the operating system, Microsoft created a new product with “some technological value.”<sup>161</sup> Microsoft’s integration of the browser and operating system was motivated by a desire to improve its product. Microsoft improved the functionality of its operating system by providing a seamless means by which users can move back and forth among various applications, including the Internet browser. Indeed, consumers have benefited greatly from Microsoft’s integration of various Web features into its operating system. As one commentator recently

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156. The District of Columbia Circuit Court even acknowledged in *Microsoft III* that “[j]ust as Microsoft integrated web browsing into its [operating system], IBM in the 1970s integrated memory into its CPU’s, a hardware platform. A peripheral manufacturer alleged a tying violation, but the district court dismissed the claim because it thought it inappropriate to enmesh the courts in product design decisions.” *Microsoft III*, 253 F.3d 34, 91 (D.C. Cir. 2001); see also *id.* at 89 (“In fact there is merit to Microsoft’s broader argument that [the Supreme Court’s tying precedent] would chill innovation to the detriment of consumers by preventing firms from integrating into their products new functionality previously provided by standalone products—and hence, by definition, subject to separate consumer demand.”).

157. See *Transamerica Computer Co. v. IBM Corp.*, 481 F. Supp. 965 (N.D. Cal. 1979) (holding that IBM’s design changes to its CPU were not unlawful under Section 2, even though IBM’s “predominant intent” was to preclude or delay competition in the peripherals market).

158. Janusz A. Ordovery & Robert D. Willig, *An Economic Definition of Predation: Pricing and Product Innovation*, 91 *YALE L.J.* 8, 29 (1981).

159. *Microsoft III*-Findings of Fact, 84 F. Supp. 2d 9, 55 (D.D.C. 1999).

160. *Microsoft II*, 147 F.3d 935, 949 (D.C. Cir. 1998).

161. *Id.*

pointed out, "If users had to buy and install separately all the features (browsers, media players, photo displayers) that make the Web go, we'd still be stuck in the 1970s."<sup>162</sup>

Thus, even if the government had elected to pursue its tying claim upon remand, it would not have been able to demonstrate that Microsoft's only rational purpose for integrating the browser was to perpetuate its monopoly in operating systems. Indeed, the remedy which the government sought for its tying claim—forcing Microsoft to provide an unbundled version of the operating system without the browser—would have been completely inappropriate. AOL Time Warner has included a tying claim in its current monopolization case against Microsoft, and it therefore may seek a similar remedy.<sup>163</sup> However, Microsoft should not be required to allow an inferior version of its product to be placed into the stream of commerce. The company has a legitimate interest in maintaining its customers' goodwill and its own reputation for quality by providing consumers with the most efficient and up-to-date products. Since the integration of Microsoft's browser into Windows enhances the functions of the operating system, a product devoid of the browser would be less attractive to many consumers.<sup>164</sup>

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162. *Finally, A Settlement*, WALL ST. J., Nov. 2, 2001, at A14; see also Krugman, *supra* note 79 ("Life would be more difficult for millions of computer users if there weren't a number of useful applications that came as standard features with the operating system.").

163. See Julia Angwin et al., *AOL Sues Microsoft Over Netscape in Case that Could Seek Billions*, WALL ST. J., Jan. 23, 2002, at B1 ("[AOL Time Warner] would like to have Microsoft offer computer manufacturers a stripped-down version of Windows that doesn't include controversial features such as Microsoft's browser."). Judge Jackson argued in his district court decision in *Microsoft III* that Microsoft could easily make an unbundled version of the operating system available to consumers. *Microsoft III-Findings of Fact*, 84 F. Supp. 2d 9, 53-54 (D.D.C. 1999).

164. When an integration of two products has enhanced the efficiency of the combination, the courts have not required the manufacturers to continue to sell the products separately. See, e.g., *ILC Peripherals Leasing Corp. v. IBM Corp.*, 448 F. Supp. 228, 233 (N.D. Cal. 1978) ("While it would be possible for IBM to sell ... [a previously separate component] for a separate price from the rest of the ... unit, just as it would be possible to sell many of the other components separately, IBM is not required to do so ...."), *aff'd sub nom.* *Memorex Corp. v. IBM Corp.*, 636 F. 2d 1188 (9th Cir. 1981). The Proposed Final Judgment in *Microsoft III*, accepted by the Department of Justice and several of the State plaintiffs, preserves Microsoft's right to continue to integrate new features into Windows, "what the company calls its 'freedom to innovate.'" John Wilke, *Negotiating all Night, Tenacious Microsoft Won Many Loopholes*, WALL ST. J., Nov. 9, 2001, at A1.

Although monopolists should be allowed to combine previously separate products in ways beneficial to consumers, the courts should not turn a blind eye to the potential anticompetitive consequences of such integrations. Any company with a large market share in a network industry may be tempted to integrate new features in a way that extends its power to new markets.<sup>165</sup> The antitrust problem stems not from the integration itself but from a monopolist's subsequent decision to implement restrictions on access to its network by firms that make products competitive with the features integrated into the network. Microsoft, for example, can integrate its own Web browser into Windows and thereafter implement design changes that make it difficult, if not impossible, for other Web browsers to be used in conjunction with the Windows operating system. Indeed, by restricting access to its network, a monopolist could endlessly extend its monopoly into the markets served by any of the functions it integrates into the network. The next section describes how the courts can use a traditional antitrust approach, called the "essential facilities doctrine," to preclude such conduct and ensure that all competitors are able to use a monopoly network as required to compete in any markets served by the network.

### *C. Access Restrictions*

#### *1. The Essential Facilities Approach*

Traditionally, geographical features such as oceans, rivers, and highways have served as the critical gateways to U.S. product markets. However, with the advent of high-speed computing, electronic networks have also become an avenue through which

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165. See Birdis, *supra* note 18 ("Any company that has a large market share, particularly in a networked industry, will be tempted to tie whatever it can into its dominant product.") (quoting Stephen Houck, partner, Reboul, MacMurray, Hewitt, Maynard & Kristol); Jacobson, *supra* note 78, at 92 ("[I]f the law allows the operating system monopolist to wipe out competition in applications markets at will ... by bolting the Microsoft version of the application to the operating system, no one is going to invest good money in developing applications .... That cannot be good."); Steve Lohr, *Pendulum Swings to Microsoft, but the Degree Remains Uncertain*, N.Y. TIMES, Sept. 7, 2001, at C1 ("[B]undling new products into Windows ... serves to give Microsoft an enormous advantage against any competitor who happens to be in its path.").

firms must pass to compete in many markets. A stock broker, for example, could not compete effectively in the market for the sale of public securities if denied access to the New York Stock Exchange's computer network,<sup>166</sup> a bank could not compete in the national credit card market without access to the Visa or MasterCard networks,<sup>167</sup> and programmers for applications ranging from word processing to instant messaging could not succeed in their markets without access to the Windows operating system. The critical nature of such networks gives their owners enormous power to affect competition in the markets served by such networks. Indeed, denial of access to a high technology network is often tantamount to completely excluding a potential participant from a related market. Thus, simply by denying competitors access to its network, a firm can leverage its monopoly power from the network market to the secondary markets served by the network.

A monopolist usually will not have a legitimate reason for denying competitors access to its network. In most cases, a high technology monopolist's only purpose for an access restriction will be to extend its network monopoly into a related market. A high technology monopolist, like any other firm, should be motivated to maximize the return on its assets. In the ordinary course, therefore, a monopolist should want the largest possible number of firms to purchase its products or services. Indeed, the value of any high technology network increases in direct proportion to the number of its users.<sup>168</sup> It is thus in a monopolist's legitimate economic interest to allow all qualified users access to its network. If a firm acts against such self-interest and denies access to qualified parties, there should be a strong presumption that the firm is attempting to perpetuate or extend its monopoly power.

Such an approach is consistent with a long line of cases, dating back to 1912, in which the Supreme Court recognized that a monopolist can gain an unfair advantage by denying its competitors the right to access a resource required to engage in effective

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166. See *Silver v. New York Stock Exch.*, 373 U.S. 341, 344 (1963) (discussing effects of the denial of a broker's access to New York Stock Exchange).

167. See Thomas A. Piraino, Jr., *The Antitrust Analysis of Network Joint Ventures*, 47 HASTINGS L.J. 5, 41 (1995) (describing such systems' unique cost advantages and economies of scale that an individual bank could not duplicate).

168. See *supra* notes 50-54 and accompanying text.

competition in a particular market. In those cases, the Court required monopolists to make certain "essential facilities" equally available to all qualified parties.<sup>169</sup> Many of the essential facility cases involved networks with characteristics similar to today's high technology networks.<sup>170</sup>

## 2. Access to Telecommunications Networks

The approach proposed in this Article would prevent the owners of broadband cable networks from extending their monopoly power into various Internet markets. Most U.S. communities continue to be served by single cable companies with monopoly power.<sup>171</sup> Cable

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169. See *Otter Tail Power Co. v. United States*, 410 U.S. 366, 377 (1973) (requiring electric utility to provide wholesale power to cities that had established their own power companies); *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 364 U.S. 656, 659-60 (1961) (per curiam) (requiring that a seal of approval from industry standards-setting organization be made equally available to all competitors); *Lorain Journal Co. v. United States*, 342 U.S. 143, 152-57 (1951) (requiring newspaper to sell advertising to patrons of radio station that competed with newspaper in local media market); *United States v. Terminal R.R. Ass'n*, 224 U.S. 383, 394-97 (1912) (requiring open access to railroad terminals that controlled the only means of access to two bridges leading across the Mississippi River to St. Louis). In a similar line of cases, the Supreme Court required monopolists to prove a legitimate business justification for refusing to deal with rivals. See *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 483 (1992) (requiring Kodak to prove "valid business reasons" for refusing to deal with firms servicing its copiers); *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 610-11 (1985) (requiring ski resort to prove its efficiency justification for refusing to cooperate with a rival in marketing a multi-mountain ski ticket).

170. The essential facility doctrine originally covered physical assets such as transportation facilities. See *Terminal R.R. Ass'n*, 224 U.S. at 394-97. However, it was eventually extended to cover various types of networks. See *Silver*, 373 U.S. at 347-49 (requiring access to electronic connection among stock brokers); *Associated Press v. United States*, 326 U.S. 1, 21-23 (1945) (precluding members of Associated Press from denying access by their competitors to wire news services). In recent years, the lower federal courts have applied the essential facility doctrine to high technology networks, requiring the owners of networks with monopoly power to permit competitors to use the networks on equal terms. See *MCI Communications Corp. v. AT&T Co.*, 708 F.2d 1081, 1131-33 (7th Cir. 1983) (requiring AT&T, which at the time of the suit still owned the local Bell telephone systems, to allow MCI, its competitor in the long-distance market, to interconnect its long-distance lines with AT&T's local lines); *United States v. Realty Multi-List, Inc.*, 629 F.2d 1351 (5th Cir. 1980) (precluding real estate multiple listing service from adopting subjective membership rules that could exclude qualified brokers); *Intergraph Corp. v. Intel Corp.*, 3 F. Supp. 2d 1225, 1269-70 (N.D. Ala. 1998), *vacated by* 195 F.3d 1346 (Fed. Cir. 1999) (finding that Intel's microprocessors constituted an essential facility because the network of installed base of computer workstations used such microprocessors and holding that Intel must provide competitor with access to microprocessors and related technical information).

171. See Robert Frank & Deborah Solomon, *Cable Industry Mergers? Count the Ways*,

has the broad bandwidth that allows it to carry all types of data, including video, audio, text, film, and still pictures, to consumers, simultaneously and quickly, over a single wire. Cable systems have a unique advantage over telephone lines. Because of their narrower bandwidth, telephone lines accept Internet transmissions at much slower speeds than cable networks.<sup>172</sup> Thus, for many consumers, "broadband cable could become the sole entry point into the home for a whole new world of information, communication, and entertainment services."<sup>173</sup> Unless they are required to grant open access to all rivals, cable operators could effectively control what consumers see on the Internet, by directing them exclusively to the cable companies' own broadband services.<sup>174</sup>

In the 1990s, AT&T purchased several cable operations that constitute the sole source of broadband service for their subscribers.<sup>175</sup> AT&T markets its own Internet access service, and by requiring its cable customers to connect to the Internet through that service, AT&T can leverage its cable monopoly into the Internet service market. Under the approach proposed in this Article, however, AT&T's cable system would be deemed an essential facility to which other Internet service providers should be granted equal access. In the areas covered by AT&T's cable networks, competing Internet service providers have no other means of reaching consumers through a broadband network, and a similar network would be too expensive to duplicate. There is little reason to believe that local cable markets would support the construction of a second system to consumers' homes. AT&T has no rational reason to forego cable revenue from providers of Internet

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WALL ST. J., Jan. 22, 2002, at C1 ("[Cable companies] are virtual monopolies, with little or no competition from other cable companies in their markets.").

172. See Bryan Gruley, *AOL Leads Lobbying Campaign to Gain Access to 'Broad-Band' Cable TV Lines for the Internet*, WALL ST. J., Jan. 26, 1999, at A20 (describing relative disadvantages of telephone lines); Michael J. Wolf, *And the Triumph of Broadband*, WALL ST. J., Jan. 11, 2000, at A26 (describing capabilities of cable's broad bandwidth).

173. Anthony Perkins, *New Hope for the New Economy*, WALL ST. J., Jan. 15, 2001, at A22; see also Murray, *supra* note 52, at A1.

174. See John Schwartz, *Bigger is Always Way Better*, N.Y. TIMES, Feb. 24, 2002, § 4 (Week in Review), at 5 ("[Cable] companies, through preferential treatment of their own enterprises and those of business partners, could inundate consumers with marketing come-ons for a few sites, making it easy to ignore alternatives.").

175. John R. Wilke & Kathy Chen, *Merger Partners Vow Open Access to Cable Lines*, WALL ST. J., Jan. 11, 2001, at B1.

services, other than to prevent them from competing with it in the service market. Thus, it is appropriate to require AT&T, and any other owner of a monopoly in local cable service, to allow competing providers of Internet services open access to such cable systems.<sup>176</sup>

### 3. Access to the Windows Operating System

The proposed approach would also ensure open competition in markets for the wide range of applications that utilize the Windows operating system. In *Microsoft III*, neither the district court nor the circuit court found that the company had denied its competitors access to Windows as an essential facility. However, both the district court and the circuit court held that, with over ninety-five percent of the market for Intel-compatible personal computer operating systems, Microsoft possessed monopoly power.<sup>177</sup> Under the approach proposed in this Article, the Windows operating system would be deemed to be an essential facility, and Microsoft would be required to give all its competitors equal access to the system.<sup>178</sup> As a resource which programmers must use in order to compete in the applications markets, Windows possesses all the characteristics of the networks to which open access was compelled in the essential facilities cases.<sup>179</sup> Microsoft has no reason to deny its competitors access to Windows, other than to perpetuate its operating system monopoly. If Windows were deemed an essential facility, the courts could adopt effective remedies to prevent

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176. Twelve of the hundreds of municipalities that reviewed AT&T's recent purchases of cable systems required the company to guarantee access to other Internet service providers. Wilke & Chen, *supra* note 175, at B1. Similarly, as a condition to its approval of AOL's acquisition of Time-Warner, the FTC required the merged entity to allow competing Internet access providers to use the company's cable systems. See Julia Angwin, *FTC Approves AOL-Time Warner Deal*, WALL ST. J., Dec. 15, 2000, at B8. In December 2001, Comcast agreed to merge its cable operations with AT&T's cable systems. The merged entity, AT&T Comcast, will hold monopoly power in even more communities. Deborah Solomon & Robert Frank, *Comcast Deal Cements Rise of Oligopoly in the Cable Business*, WALL ST. J., Dec. 21, 2001, at A1. Thus, following the transaction, AT&T Comcast should also be required to ensure open access to its cable systems.

177. *Microsoft III*, 253 F.3d 34, 51-58 (D.C. Cir. 2001); *Microsoft III-Conclusions of Law*, 87 F. Supp. 2d 30, 36 (D.D.C. 2000).

178. As one commentator has pointed out: "Windows is the gateway through which all the hardware and software used in the vast majority of personal computers must pass." Lohr, *supra* note 43.

179. See *supra* notes 169-70 and accompanying text.



Microsoft from leveraging its operating system monopoly into the applications markets. As in the essential facility cases, Microsoft would be required to give its competitors in the applications markets the same access to Windows as its own products enjoy.

*a. Microsoft's Denial of Access to Windows*

Microsoft has engaged in, and continues to pursue, a variety of anticompetitive acts designed to perpetuate its operating system monopoly and to leverage that monopoly into various applications markets. Microsoft's activities originally were designed to prevent Netscape's Navigator browser from becoming a viable alternative platform for applications programs. After integrating its own browser into Windows 98, Microsoft succeeded in denying Navigator access to the critical distribution channels necessary for its success. Computer manufacturers such as Hewlett-Packard, Gateway, Dell, and Compaq (OEMs) constitute one of the most important channels of distribution for Internet browsers and other applications competitive with those made by Microsoft. Consumers are not likely to delete applications that are pre-installed by OEMs.<sup>180</sup> Thus, pre-installed applications have a critical advantage over any competing applications. In order to give its own browser such a competitive advantage, Microsoft included various provisions in its license agreements aimed at preventing OEMs from pre-installing competing browsers.<sup>181</sup> OEMs were forbidden to delete icons for Microsoft's Explorer browser from the "boot-up" screen that users first see when they turn on their computers. OEMs were also precluded from adding icons different in size or shape than those supplied by Microsoft, using the "Active Desktop" feature to promote rival applications, or causing any user interface other than the Windows desktop to launch automatically.<sup>182</sup>

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180. See Competitive Impact Statement at 13, *United States v. Microsoft Corp.*, No. 98-1232 (D.D.C. Nov. 15, 2001), available at <http://www.usdoj.gov/atr/cases/f9500/9549.pdf> [hereinafter Competitive Impact Statement] ("Users rarely switched from whatever browsing software was placed most readily at their disposal, which was usually the browsing software installed on their computer by the OEM ....").

181. *Microsoft III*, 253 F.3d 34, 60 (D.C. Cir. 2001).

182. *Id.* at 61-62.

Microsoft bundled its Explorer browser with the operating system in ways that made it difficult for OEMs to remove the browser. Microsoft deleted its browser from the "Add/Remove" utility program on Windows 98 and decided to commingle the code for its browser in the same file as the code for the operating system, so that deleting the code for the browser would cripple the operating system.<sup>183</sup> The circuit court pointed out in *Microsoft III* that the company did not argue that any of these actions would achieve "any integrative benefit" for consumers.<sup>184</sup> To the contrary, Microsoft's bundling of the browser with the operating system was intended to deter OEMs from pre-installing competing browsers. Microsoft realized that OEMs product support costs would increase if the software for Microsoft's browser remained on the operating system, because they would have to "test and train [their] support staff to answer calls related to every software product pre-installed on the machine ...."<sup>185</sup> Furthermore, as long as the Microsoft software remained, pre-installing an additional browser would "to many OEMs be 'a questionable use of the scarce and valuable space on a PC's hard drive.'"<sup>186</sup>

Microsoft not only foreclosed the OEM distribution channel to rival applications; it also adopted certain design and disclosure practices that prevented Netscape and other rivals from accessing the operating system itself. Microsoft realized the advantage of withholding information on the internal design of Windows. In order to interface effectively with Windows, applications must be able to utilize Microsoft's "application programming interfaces," or "APIs."<sup>187</sup> These are the critical pathways into the Windows

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183. *Id.* at 64-66. The Microsoft browser had been included on the "Add/Remove" utility in Windows 95. *Id.* at 65. The district court found that Microsoft's decision to exclude its Internet browser from the dozens of other features covered by the "Add/Remove" utility in Windows 98 served no legitimate purpose. *Microsoft III-Findings of Fact*, 84 F. Supp. 2d 9, 52-57 (D.D.C. 1999). It also found that Microsoft's commingling of browsing and non-browsing software routines in the same file "to a greater degree than is necessary to provide any consumer benefit ... unjustifiably jeopardized the stability and security of the operating system .... [and] increased the likelihood that a browser crash will cause the entire system to crash ...." *Id.* at 53.

184. *Microsoft III*, 253 F.3d 34, 66-67 (D.C. Cir. 2001).

185. *Id.* at 64.

186. *Id.*

187. Indeed, some commentators have described the Windows API interface itself as an essential facility. *See, e.g.,* Maureen A. O'Rourke, *Drawing the Boundary Between Copyright*

operating system to “which the developer of an application can connect to invoke pre-fabricated blocks of code” that cause the operating system to serve the particular application.<sup>188</sup> Software developers must obtain information about changes in the APIs sufficiently in advance of their implementation to allow them to make the corresponding modifications to their applications programs. Microsoft has consistently withheld such information in order to give its own applications an advantage over rival programs.<sup>189</sup>

Microsoft has designed Windows so that it “doesn’t work quite right” with certain rival applications.<sup>190</sup> Like Netscape’s Internet browser, Sun Microsystems’ “Java” software has the potential to compete with Windows itself by serving as its own platform for the operation of applications programs.<sup>191</sup> Since Java was originally designed by Sun Microsystems to work with any operating system, the program “threaten[ed] Microsoft’s monopoly by making users and application writers indifferent to the operating system used.”<sup>192</sup> Microsoft, however, made it impossible for the universal version of Java to run on its operating system by designing its own Windows-compatible version of Java that lacked the cross-platform capabilities of the universal version.<sup>193</sup>

Microsoft designed the latest version of its operating system (Windows XP) in ways that continue to leverage its operating

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*and Contract: Copyright Preemption of Software License Terms*, 45 DUKE L.J. 479, 547 (1995) (“By virtue of the operating system provider’s monopoly power, its interface becomes an essential facility because access to it is necessary for others to compete.”).

188. Microsoft III-Findings of Fact, 84 F. Supp. 2d 9, 12 (D.D.C. 1999) (“The operating system supports the functions of applications by exposing interfaces, called ‘application programming interfaces,’ or ‘APIs.’”).

189. Sun Microsystems, for example, has complained that Microsoft failed to disclose technical information on the interfaces to its Windows NT operating system for business PCs and that, as a result, Sun’s server software would not function as efficiently with Windows as Microsoft’s server products. Paul Davidson, *EU Adds to Claims vs. Microsoft*, USA TODAY, Aug. 31, 2001, at 1B.

190. Krugman, *supra* note 79, at 3. The European Commission has alleged that Microsoft “deliberately designed its Windows 2000 desktop software and companion products so that they wouldn’t work well with rivals’ software.” John R. Wilke, *Microsoft May Face Huge Fine From EU*, WALL ST. J., Oct. 10, 2001, at A3.

191. Microsoft III-Findings of Fact, 84 F. Supp. 2d 9, 17, 26, 28 (D.D.C. 1999).

192. Robert H. Bork & Kenneth W. Starr, *Court Ruling Was No Victory for Microsoft*, WALL ST. J., July 5, 2001, at A12.

193. Microsoft III-Findings of Fact, 84 F. Supp. 2d 9, 106-07 (D.D.C. 1999).

system monopoly into new applications markets. Windows XP, in fact, continues Microsoft's policy of denying access to Sun Microsystems' Java program. Windows XP does not include the software necessary to run Java-based programs.<sup>194</sup> One commentator recently described Windows XP as "a sort of Trojan horse" for various Internet services for which Microsoft can charge a subscription fee.<sup>195</sup> Microsoft has built in certain features, such as instant messaging, music and video players, and online photo printing, "that are just blatant efforts to lure consumers into using a set of new Web-based services Microsoft is launching, while ignoring alternative services that may be better."<sup>196</sup> Since the services being bundled into Windows XP can reach into all corners of the Internet, they are even more threatening to competition than Microsoft's earlier acts directed solely against Netscape's Internet browser.<sup>197</sup>

Microsoft believes that by pre-loading its own Internet services on Windows XP it can prevent OEMs from offering consumers similar services from its competitors. Indeed, Windows XP does more than simply integrate Microsoft's Internet services; it "contains hooks that could drive ... [users] to Microsoft's own

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194. John R. Wilke & Don Clark, *Microsoft Pulls Back Its Support for Java*, WALL ST. J., July 18, 2001, at A3.

195. Walter S. Mossberg, *The New Windows: Best Yet, but Beware*, WALL ST. J., Sept. 20, 2001, at B1.

196. *Id.* Another commentator recently described Microsoft's "moves to fold a breathtaking series of features into its new and disturbingly powerful operating system ..., which is fully Internet-oriented." Kara Swisher, *They're Here, They're Feared, So Get Used to It*, WALL ST. J., July 2, 2001, at B1.

197. See Buckman, *supra* note 112, at A1 (arguing that Microsoft's current anticompetitive acts are "in many ways more expansive than Microsoft's earlier tactics of linking new desktop products to Windows."). Microsoft's competitors allege that "Windows XP is being designed to extend the Microsoft monopoly to the Internet ...." John R. Wilke & Don Clark, *Senate Panel Plans Hearing Over Microsoft*, WALL ST. J., July 24, 2001, at A3. Microsoft has agreed to make it easier for users to include rival Internet browsers on Windows, but Microsoft's competitors point out that such browsers now pose only a small competitive threat to Microsoft. *Id.* at A10. Microsoft's integration of Internet services into its latest version of Windows targets AOL Time Warner in the instant messaging market and RealNetworks in Internet music and video markets "with much the same aggressiveness ... [Microsoft] once used in going after Netscape ...." John R. Wilke & James Bandler, *New Digital Camera Deals Kodak a Lesson in Microsoft's Ways*, WALL ST. J., July 2, 2001, at A1. As the CEO of a Web services company recently stated, "The big play is to try to tie [all the new services] together into one gigantic universe. It makes some of the things they did in 1995 now look like child's play." Buckman, *supra* note 112.

Internet services, rather than competitors.”<sup>198</sup> Windows XP partially disables the applications software of “some of Microsoft’s fiercest rivals,” including Apple Computer’s media player, AOL Time Warner’s America Online software, and RealNetwork’s audio software.<sup>199</sup> Microsoft’s instant messaging, identity authentication, and photo printing services “work only with Microsoft’s own proprietary Internet services, or services owned by companies that pay Microsoft for inclusion in Windows XP.”<sup>200</sup> Microsoft’s instant messaging system, called “Windows Messenger,” connects only to Microsoft’s own messaging network and not to “the larger and more popular AOL messaging system.”<sup>201</sup> Users, in fact, cannot utilize Windows Messenger without signing up for “Passport,” a universal Internet log-in and identification card, that serves as the gateway to all of Microsoft’s Internet services. Passport stores users’ credit card and password information for a host of new consumer services that Microsoft has named “Hailstorm.” Combining instant messaging, digital music, and video, those services, for a monthly subscription fee, will allow users to purchase products online, receive e-mail at remote cellphones or other mobile devices, and make copies of digital music.<sup>202</sup>

Microsoft would not have taken all these actions to deny access to the OEM distribution channel and to the Windows operating system itself, unless it intended to perpetuate and extend its Windows monopoly. It is in Microsoft’s legitimate interest to maximize revenues by insuring that as many different applications as possible use the Windows system.<sup>203</sup> Microsoft had no legitimate

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198. Buckman, *supra* note 112. AOL Time Warner fears that access to the Microsoft Internet services bundled into Windows XP will be “made so easy and obvious that consumers will never get around to trying competing products ....” Hiawatha Bray, *Microsoft’s Aggressive Unveillings Cause Worry*, CLEV. PLAIN DEALER, June 11, 2001, at 1-C.

199. Mossberg, *supra* note 195. This feature of Windows XP has been termed “somewhat suspicious.” *Id.*

200. Walter S. Mossberg, *For Microsoft, 2001 Was a Good Year, But at Consumers’ Expense*, WALL ST. J., Dec. 27, 2001, at B1.

201. Mossberg, *supra* note 195.

202. Buckman, *supra* note 112 (“In essence, ... [Passport] is Microsoft’s way of attacking the field of Internet commerce and intensifying its push into subscription-based services that it can sell for recurring fees.”).

203. As one commentator suggested, “Shouldn’t a firm with a successful operating system product, such as Microsoft’s Windows, welcome the development of applications programs? After all, the more and better the applications ... the greater the demand for operating systems.” Timothy F. Breshahan, *A Remedy that Falls Short of Restoring Competition*, 16

reason to alienate OEMs and consumers by making it so difficult for applications such as Navigator, Java, and competing Internet services to interface with Windows. In doing so, Microsoft has revealed its true purpose to exclude competitors from these applications markets.

*b. Remedies for Ensuring Access to Windows*

*i. The Final Judgment*

The District Court for the District of Columbia is currently considering remedies in the *Microsoft III* remand proceeding. It has also begun to consider AOL Time Warner's monopolization case against Microsoft. In both cases, the court could use the approach proposed in this Article to craft a comprehensive open access decree that would prevent Microsoft from continuing to perpetuate and extend its operating system monopoly. The Department of Justice and several of the state plaintiffs have agreed to settle *Microsoft III*, and they submitted a proposed Final Judgment to the district court (Final Judgment).<sup>204</sup> Several other states refused to join the settlement and elected to continue to pursue the case in the remand proceedings. Although the Final Judgment does not adopt any particular legal theory, it imposes certain restrictions on Microsoft's behavior that will enhance access to the Windows operating system. In several respects, however, the Final Judgment falls short of a comprehensive open access decree. The district court should address these deficiencies by adopting a broader remedial approach in its final remand decision.

The final remedy in *Microsoft III* must deal with all of the means by which the company leverages its operating system monopoly. At the same time, the remedy must protect Microsoft's right to continue to improve Windows. The company must remain free to integrate new functions into Windows that benefit consumers. Microsoft should not, for example, be deemed to have illegally tied its instant messaging system to Windows simply by

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ANTITRUST, Fall 2001, at 67, 67.

204. Second Revised Proposed Final Judgment, *United States v. Microsoft*, No. 98-1232 (D.D.C. Feb. 27, 2002), available at <http://www.usdoj.gov/atr/cases/f10100/10146.htm> [hereinafter Final Judgment].

embedding the software in the operating system. Such conduct had a legitimate purpose apart from Microsoft's desire to leverage its operating system monopoly. Consumers benefit from such bundling by being able to use the instant messaging feature in conjunction with other Internet services.<sup>205</sup> Thus, it is appropriate that the Final Judgment does not require Microsoft to make available versions of Windows in which particular functions have been removed.<sup>206</sup> Such a requirement would force Microsoft to market an inferior product to consumers.<sup>207</sup>

The final remedy in *Microsoft III* must ensure open access to the OEM distribution channel.<sup>208</sup> The Final Judgment takes several important steps to open the OEM distribution channel to competing applications. Microsoft cannot restrict the freedom of OEMs to pre-install competing applications, and the company is precluded from taking any actions to retaliate against OEMs that distribute or promote such applications.<sup>209</sup> The Final Judgment also prevents Microsoft from selectively modifying the terms of its license agreements to induce particular OEMs to avoid competing applications. Microsoft is required to license Windows under uniform terms to the twenty largest OEMs in the world, and it must publish its pricing terms on a Microsoft website accessible to OEMs and to the government.<sup>210</sup> Finally, Microsoft may not use its

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205. One commentator has pointed out that the integration of instant messaging with Windows will allow consumers to be notified electronically of "events ranging from a busted eBay bid to a cancelled plane flight ...." Buckman, *supra* note 112.

206. As one commentator explained, "[u]nder the proposed deal, Microsoft won't be forced to remove anything from Windows, leaving intact the browser, online audio-video players and instant messaging." John R. Wilke et al., *Microsoft Antitrust Accord Would Place Few Restrictions on Entering New Markets*, WALL ST. J., Nov. 2, 2001, at A3.

207. The Department of Justice, in fact, considered, and then rejected, the idea of including such a requirement in the Final Judgment. Competitive Impact Statement, *supra* note 180, at 60-63. However, the remaining state plaintiffs in *Microsoft III* have requested that the district court require Microsoft to make available to OEMs versions of the operating system that delete any functions (including browsers, e-mail, media services, playback software, digital imaging, and instant messaging software) that have been bundled into Windows. Plaintiff Litigating States' Remedial Proposals at 5, *United States v. Microsoft Corp.*, No. 98-1232 (D.D.C. Dec. 7, 2001), available at <http://209.190.248.167/issues/microsoft/pdf/011207-states-remedy.pdf> [hereinafter, Plaintiffs' Remedial Proposals].

208. As one commentator recently pointed out, "If the PC makers have greater freedom to add rivals' software and remove some features that Microsoft bundles with Windows, ... consumers should benefit from a greater diversity of offerings." Lohr, *supra* note 165.

209. Final Judgment, *supra* note 204, §§ III.A., III.C.

210. *Id.* § III.B.

license agreements to preclude OEMs from removing icons, shortcuts, or menu entries for Microsoft applications, replacing such features with those designed to direct users to non-Microsoft applications,<sup>211</sup> and electing to have the operating system automatically invoke competing programs in place of Microsoft applications.<sup>212</sup>

### *ii. Deficiencies in the Final Judgment*

Under the Final Judgment, Microsoft can still take certain steps to foreclose the OEM distribution channel to competing applications. Microsoft may prevent Windows from invoking a non-Microsoft product whenever that product fails “to supply the end user with functionality consistent with a Windows Operating System Product” or “fails to implement a reasonable technical requirement” of Microsoft.<sup>213</sup> This provision gives Microsoft considerable leeway to continue to direct end users to its own applications, and it should be eliminated by the district court in its final remedy. The Final Judgment also does not restrict Microsoft from inducing users to remove competing applications after they have been pre-installed by OEMs. The final remedy should preclude Microsoft from using rebates, discounts, or other incentives to convince users to change their selection of applications after they purchase a personal computer.

The Final Judgment entirely disregards the District of Columbia Circuit Court’s conclusion in *Microsoft III* that the company bundled its Internet browser with the operating system in order to prevent OEMs from pre-installing competing browsers.<sup>214</sup> The circuit court’s conclusions on bundling were the most controversial aspect of its *Microsoft III* decision.<sup>215</sup> The bundling conclusions,

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211. *Id.* §§ III.C., III.H. However, as one commentator recently pointed out, “it is unclear whether any PC makers will ... [take advantage of their right to alter the boot-up screen]. Microsoft offered this flexibility for browsers in July [2000], and not one major PC maker took them up on it.” Wilke et al., *supra* note 206.

212. Final Judgment, *supra* note 204, § III.H.2.b.

213. *Id.*

214. *Microsoft III*, 253 F.3d 34, 64-67 (D.C. Cir. 2001).

215. In fact, Microsoft filed a motion requesting that the circuit court reconsider its finding that Microsoft’s bundling of the browser with Windows was anticompetitive. In a short three-sentence decision, the circuit court denied Microsoft’s motion. *United States v. Microsoft*



however, may ultimately prove to be the most important portion of the *Microsoft III* case.<sup>216</sup> On remand, the district court should recognize, as the circuit court did, that OEMs will be willing to install a competing application in place of Microsoft's only if they can remove not only the visible evidence of Microsoft's application (i.e., icons, shortcuts, and menu entries), but also the underlying software that powers the application. As the circuit court explained with respect to Microsoft's browser, if OEMs had been able easily to remove the Internet Explorer browser, "they might have chosen to pre-install Navigator alone."<sup>217</sup> Thus, Microsoft should be required to include its applications on the "Add/Remove" utility program and to cease its practice of commingling the code for its applications with the operating system code.<sup>218</sup> OEMs could then truly configure software on their PCs in a manner dictated by consumers. OEMs would have a choice of electing to accept Windows as is, configured only with Microsoft applications, or to substitute competing programs for the Microsoft applications.

It is not enough, however, for Microsoft simply to allow open access to the OEM distribution channel; it must also permit open access to the Windows operating system itself. The Windows operating system has no inherent capacity limitations. Its value both to Microsoft and to its customers increases with the number of compatible applications programs. Thus, it is against Microsoft's legitimate interest to make it difficult for competitors' applications to work in conjunction with Windows. In order to give competing applications a level playing field, the final remedy should require

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Corp., No. 00-5213 (D.C. Cir. Aug. 2, 2001), available at <http://ecfp.cadc.uscourts.gov/MS-DOCS/1741/0.pdf>.

216. See Wilke et al., *supra* note 206 (referring to "the most critical part of the appeals-court decision" and concluding, "Most important, the court found that 'commingling' competitive features such as the Internet browser with Windows was unlawful if its purpose was to protect the Windows monopoly.").

217. *Microsoft III*, 253 F.3d 34, 66 (D.C. Cir. 2001).

218. Charles James, the Assistant Attorney General for the Antitrust Division of the Department of Justice, has argued that Microsoft's new Internet features are so deeply woven into Windows that they cannot be removed without harming the operating system. He recently asked, "How would consumers be served if we forced Microsoft to remove that code? The market has changed." Wilke, *supra* note 164. However, both the district court and circuit court in *Microsoft III* answered this question by stating that Microsoft should not have designed the relevant version of Windows initially in such a way that removing the code for a particular application would cripple the entire operating system. See *supra* notes 183-86 and accompanying text.

Microsoft to (1) design Windows so that consumers can replace Microsoft products with applications of their own choice, (2) make timely disclosure of technical API information to rival applications programmers, and (3) refrain from imposing hurdles to Java's interface with Windows.

If consumers are to have a real choice of competing applications, they, as well as OEMs, should be able to cause the Windows operating system to invoke non-Microsoft applications. As a commentator recently pointed out, the Windows "interface should be neutral about which service a customer wants."<sup>219</sup> Therefore, instead of initially calling up a Microsoft application, the Windows interfaces should include a prompt that explains how users can attach their own instant messaging, browser, e-mail, or other application.

The Final Judgment requires Microsoft to disclose to rival applications developers technical information concerning its APIs.<sup>220</sup> The Final Judgment, however, does not eliminate Microsoft's advantage in having such information well in advance of its competitors. Under the Final Judgment, Microsoft is not required to release API information until new versions of the operating system have entered the "beta," or testing phase. Indeed, the Final Judgment does not require disclosure until after Microsoft has released a test version of a new Windows program that is made available through a subscription offering or of which 150,000 or more beta copies are distributed.<sup>221</sup> This will be too late for rival applications firms to develop programs that can be immediately

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219. Mossberg, *supra* note 200.

220. Final Judgment, *supra* note 204, § III.D. Microsoft has "allegedly leveraged its monopoly power from operating systems into application software markets, by withholding technical information on interfaces ... from application developers." Sheremata, *supra* note 1, at 945. Microsoft has no legitimate reason to deny competitors information concerning its APIs. It can disclose sufficient information about the APIs to enable programmers to write such applications without disclosing the vital portions of the Windows source code. Thus, Microsoft should be required to disclose "enough high level information to satisfy the requirements of application writers without disclosing low-level kernel detail that discloses much about the implementation of the operating system ...." O'Rourke, *supra* note 187, at 513 n.150. Microsoft, in fact, already discloses such information to certain computer manufacturers and software developers. See Microsoft III-Findings of Fact, 84 F. Supp. 2d 9, 40, 42 (D.C. Cir. 1999). The company should extend the same advantage to all software developers, including those developing cross-platform applications.

221. Final Judgment, *supra* note 204, § III.D.

competitive with Microsoft. Microsoft can also refuse to disclose technical information to a firm that does not meet reasonable, objective standards established by Microsoft for qualifying as a viable business.<sup>222</sup> This provision "could be a loophole for Microsoft to keep information from a start-up with no track record, but whose technology could challenge one of Microsoft's products."<sup>223</sup> The final remedy in *Microsoft III* should eliminate these exceptions and simply require Microsoft to make technical information concerning any changes in its APIs available to all third-party applications developers at the same time the company makes such information available to its own applications programmers.<sup>224</sup>

The final remedy in *Microsoft III* should also ensure that Java software has the same ability to run on Windows as Microsoft's own applications software. The Final Judgment precludes Microsoft from retaliating against any software developers that develop or promote competing software such as Java.<sup>225</sup> However, the Final Judgment does not prevent Microsoft from developing and promoting a version of Java that runs only on Windows, or from designing Windows so that a "cross-platform" version of Java will not run effectively. The district court concluded in *Microsoft III* that Microsoft's development of its own Java version was anticompetitive, because it was designed to protect Microsoft's monopoly in operating systems.<sup>226</sup> The District of Columbia Circuit Court reversed the Java liability finding, concluding that "a monopolist does not violate the antitrust laws simply by developing a product that is incompatible with those of its rivals."<sup>227</sup> Under the approach proposed in this Article, however, Microsoft's redesign of Java would constitute an illegal denial of access to Windows. Microsoft had no legitimate reason to make Windows incompatible

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222. *Id.* § III.J.2.c.

223. Stephen Labaton & Steve Lohr, *U.S. and Some States Split on Microsoft, Risking New Delay*, N.Y. TIMES, Nov. 6, 2001, at C1.

224. *See id.* ("I would prefer that ... [the final remedy] simply embrace the principle that competitors will get equal treatment with the Microsoft developers making software products that run on Windows.... The decree should say outside firms will be treated equally instead of giving Microsoft a head start.") (quoting anonymous Microsoft competitor).

225. Final Judgment, *supra* note 204, § III.F.

226. Microsoft III-Findings of Fact, 84 F. Supp. 2d 9, 110 (D.D.C. 1999).

227. Microsoft III, 253 F.3d 34, 75 (D.C. Cir. 2001). The court did, however, find that Microsoft improperly discouraged software developers from supporting the universal version of Java. *Id.* at 75-78.

with Sun Microsystem's version of Java. The changes that caused such incompatibility did not add any technical value to the operating system. In fact, the changes made the operating system less efficient by preventing cross-platform porting. Thus, Microsoft was acting against its own legitimate self-interest in redesigning Java. The District of Columbia Circuit Court should have concluded in *Microsoft III* that the real purpose of the redesign was to perpetuate Microsoft's operating system monopoly, and the district court should include in the final remedy a prohibition on any designs that prevent the cross-platform version of Java from running on Windows.<sup>228</sup>

Finally, the ultimate remedy in *Microsoft III* should ensure that, in future versions of Windows, Microsoft cannot make it more difficult for consumers to use competing Internet applications. The Final Judgment is deficient in this respect. Although it does apply to future versions of the operating system and to new Internet applications designed by Microsoft, including video and audio services and instant messaging,<sup>229</sup> the Final Judgment allows Microsoft to continue to preclude competing Internet applications from accessing Windows. The company, for example, does not have to share technical API information with rivals if doing so would "compromise the security of ... anti-piracy, anti-virus, software licensing, digital rights management, encryption or authentication systems ...."<sup>230</sup> These are critical technologies for online media and Internet commerce, and many of Microsoft's competitors believe that Microsoft will use this exception to shield a number of new Microsoft applications, including Passport and Microsoft's Media Player, from disclosure requirements.<sup>231</sup> Thus, the district court should remove the exception from its final remedy in *Microsoft III*.

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228. The remaining state plaintiffs in *Microsoft III* have proposed that the district court require Microsoft to "distribute free of charge ... with all copies of ... Windows ... a competitively performing Windows-compatible version of ... Java ... ." Plaintiffs' Remedial Proposals, *supra* note 207, at 18.

229. Final Judgment, *supra* note 204, § VI.K.2.a.

230. *Id.* § III.J.1.

231. Wilke, *supra* note 164.

### *D. Exclusive Dealing*

In a competitive market, a seller may have legitimate reasons for requiring its customers to purchase products exclusively from it and not from its competitors. Such "exclusive dealing" contracts force a reseller to concentrate on promoting the seller's products and prevent it from giving rivals a "free ride" on the seller's promotional efforts.<sup>232</sup> Such rationale, however, do not apply to monopolists. Since a monopolist's products are, by definition, already dominant in the relevant market, it need not require its resellers to focus their efforts exclusively on its products. Furthermore, a monopolist incurs short-term costs when it imposes exclusive dealing arrangements on its customers. Such agreements reduce a monopolist's reservoir of goodwill with its customers and use up leverage with which a monopolist could have pursued concessions on price, delivery, and other terms of sale. A monopolist would risk incurring such short-term costs only if it believed that in the long run, it could benefit by making it more difficult for potential rivals to access the customer outlets necessary to survive in the relevant market.

The courts' current standard for exclusive dealing focuses upon the percentage of customer outlets foreclosed by the arrangement. Under the current approach, a plaintiff could prevail in an exclusive dealing case only when it could prove that more than thirty to forty percent of such outlets have been affected.<sup>233</sup> Such an approach, however, is unduly burdensome for high technology antitrust plaintiffs. A plaintiff should have to demonstrate merely that a monopolist required one or more customers not to deal with it. The adverse effect of an exclusive dealing arrangement is not dependent

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232. See *Cont'l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 55 (1977) (holding that prevention of free riding may justify certain restraints placed by seller on its customers); *Am. Motor Inns, Inc. v. Holiday Inns, Inc.*, 521 F.2d 1230, 1252 (3d Cir. 1975) (stating that a hotel chain's exclusionary agreements with franchisees is justified, in part, by the chain's desire to strengthen its position vis-à-vis its competitors).

233. See *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 7, 32 (1984) (O'Connor, J., concurring) (finding that exclusive contract which foreclosed thirty percent of market was not illegal); *Microsoft III-Conclusions of Law*, 87 F. Supp. 2d 30, 52 (D.D.C. 2000) (describing forty percent threshold of illegality for exclusive dealing arrangement); *Gonzales v. Insignares*, No. C84-1261A, 1985 WL 2206, at \*2 (N.D. Ga. 1985) (granting summary judgment for defendant when only forty percent of consumers were affected by exclusive arrangement).

upon the number of outlets that it covers. A firm may be unable to compete in the relevant market without access to a particular reseller that controls an essential gateway to the market. Foreclosure of a single customer with such characteristics can raise barriers to entry just as severely as the foreclosure of a substantial percentage of the other customers in the relevant market.

In *Microsoft III*, the government claimed that Microsoft had entered into various exclusive dealing arrangements with OEMs, Internet access providers (IAPs), and Internet content providers (ICPs) in order to foreclose Netscape's browser from the market. Microsoft provided various inducements to such parties, including rebates, reduced prices, free versions of Microsoft's browser, and preferential placement on the Windows boot-up screen, all in exchange for agreements by the OEMs, IAPs, and ICPs to promote Microsoft's browser exclusively. Judge Jackson held that these arrangements were not illegal, because they did not foreclose at least forty percent of the relevant market.<sup>234</sup> The District of Columbia Circuit Court, however, concluded that it was sufficient that the arrangements foreclosed "a substantial percentage of the available opportunities for browser distribution."<sup>235</sup>

Neither of these approaches dealt appropriately with Microsoft's arrangements with OEMs, IAPs, and ICPs. The district court's formulation failed to recognize that Microsoft should have been prevented from foreclosing any of these critical distribution channels from its competitors. For its part, the circuit court neglected to explain what percentage foreclosure is substantial enough to warrant Section 1 liability. By contrast, the proposed approach recognizes that monopolists have no legitimate reason for entering into exclusive dealing arrangements. A prohibition of all such arrangements will clarify the standards for exclusive dealing and deter monopolists from inducing their customers to assist them in perpetuating or extending their monopoly power.

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234. Microsoft III-Findings of Fact, 84 F. Supp. 2d 9, 67-68, 71-72 (D.D.C. 1999); Microsoft III-Conclusions of Law, 87 F. Supp. 2d 30, 52 (D.D.C. 2000).

235. Microsoft III, 253 F.3d 34, 70 (D.C. Cir. 2001). The Final Judgment prohibits Microsoft from entering into exclusive dealing arrangements with OEMs, IAPs, and ICPs. Final Judgment, *supra* note 204, § III.F.

### *E. Predatory Pricing*

Predatory pricing occurs when a firm lowers its prices in order to eliminate a current competitor in the relevant market or to prevent new firms from entering the market.<sup>236</sup> After a rival exits or declines to enter the relevant market, the monopolist can recoup profits in excess of the losses it incurred in driving the rival from the market.<sup>237</sup> Since the late 1970s, the federal courts generally have adopted the definition of predatory pricing set forth in a 1975 law review article by Professors Areeda and Turner.<sup>238</sup> Under the Areeda-Turner approach, a price is considered per se lawful (i.e., nonpredatory) if it equals or exceeds the marginal cost of producing the product, while it is deemed per se illegal (i.e., predatory) if it is below a firm's marginal cost.<sup>239</sup> The Areeda-Turner approach is based on the recognition that lower prices benefit consumers and are usually the result of fair competition. Under Areeda-Turner, a firm that makes any profit on each additional product it sells, however small, is presumed to do so because it is efficient. Only if a company incurs losses on selling each additional product is it presumed to be acting for anticompetitive reasons.<sup>240</sup>

The Areeda-Turner test, however, poses too high a hurdle for plaintiffs in high technology markets. Even if they do not reduce their prices to a level below their costs, high technology firms may engage in predatory pricing strategies that make no sense other than as an attempt to acquire or maintain monopoly power. Indeed, a cost-based rule allows high technology firms to evade predatory pricing liability entirely, because the marginal cost of producing most intellectual property is zero.<sup>241</sup> Once a high technology firm

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236. See Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 697 (1975).

237. As the Supreme Court pointed out, "For the investment to be rational, the [monopolist] must have a reasonable expectation of recovering, in the form of later monopoly profits, more than the losses suffered." *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 588-89 (1986).

238. Areeda & Turner, *supra* note 236, at 698-99.

239. See, e.g., *California Computer Prods., Inc. v. IBM Corp.*, 613 F.2d 727, 743 (9th Cir. 1979) (quoting extensively from Areeda and Turner's seminal article in finding that IBM did not engage in predatory pricing when it sold products at levels above marginal cost).

240. Areeda & Turner, *supra* note 236, at 711-12.

241. See Patrick Bolton et al., *Predatory Pricing: Strategic Theory and Legal Policy*, 88 GEO. L.J. 2239, 2285 (2000) (reasoning that "a cost-based rule that required price to be below

has achieved monopoly power, its low marginal costs give it the ability to "underprice potential competitors who may thus never get big enough to prosper."<sup>242</sup> With negligible marginal costs, high technology firms can reduce their prices to levels low enough to discourage new entry but high enough to maintain their profitability.

The unique economic characteristics of high technology markets aggravate the adverse effects of predatory pricing. Because the ultimate chances of success for any single firm are so slim, potential entrants may be more easily discouraged when an incumbent firm implements a low-pricing strategy.<sup>243</sup> Courts must act quickly to prevent predatory pricing before the strategy is successful, because network monopolies, once established, are very difficult to unwind.<sup>244</sup> Indeed, network owners have a substantial incentive to engage in predatory pricing when they are vying for market power at a market's initial development stage. Since every new user increases the value of a network, the revenue lost on temporary price reductions may be more than made up by the higher price users ultimately will pay for access to a larger network. Recoupment of any losses will be easier, because consumers will be reluctant to abandon a network once it obtains monopoly power, even if the network substantially increases its prices.<sup>245</sup>

Instead of the cost-based standard of Areeda-Turner, courts should adopt a broader purpose-based approach to predatory pricing in high technology markets. Courts should preclude any pricing strategy that makes no sense other than as an attempt to extend or perpetuate a firm's monopoly power, regardless of whether the firm prices below its costs. A high technology

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short-run costs in all cases would effectively exempt computer software from predatory pricing constraints").

242. *Id.*, *supra* note 65.

243. See Bolton et al., *supra* note 241, at 2247-48 (pointing out that firms confronted with predatory pricing in high technology markets "may be deterred from entering the industry").

244. See Teece & Coleman, *supra* note 10, at 869 ("With network industries, ... allegations of anticompetitive behavior need to be treated quickly and seriously. Once the market has tipped it may be difficult or even undesirable to undo any anticompetitive effects that have arisen ....").

245. See Lemley & McGowan, *supra* note 45, at 725 ("Because returns in strong network markets increase with demand ... and because consumers' reluctance to abandon the dominant standard may deter entry, recoupment of losses incurred ... may be easier than has been presumed ... in nonnetwork markets.").



monopolist need not necessarily reduce its prices below cost in order to deter a potential rival from entering its market. For example, a cable company with a monopoly in a local market might reduce its prices when faced by potential competition from a firm contemplating the construction of a rival cable system. Since the costs of constructing such systems are substantial, even a relatively small reduction in cable rates could deter the rival from proceeding with the new system. The incumbent cable system would have no rational reason for foregoing profits other than to eliminate a potential competitor. Assured of its local monopoly, the cable system could easily raise its rates and recoup its losses after the new entrant was eliminated as a potential threat. The courts could preclude such a strategy under the approach proposed in this Article.

## V. APPLYING THE PROPOSED APPROACH TO HIGH TECHNOLOGY COLLABORATIONS

### *A. Deficiencies in the Current Approach*

High technology collaborations have become increasingly popular in recent years. Indeed, B2B collaborations have become the most prevalent form of joint venture for American companies,<sup>246</sup> including as partners the “stalwarts of the Old Economy,” such as General Motors and Ford, as well as high technology firms.<sup>247</sup> The *FTC Staff Report* characterizes B2Bs as “the new business development most likely to transform how business is conducted in the twenty-first century.”<sup>248</sup> The *Report* states that hundreds of billions of dollars in transactions are already being directed through

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246. Commentators have observed that the scope of new B2Bs is “more pervasive, larger and all encompassing than any previous wave of joint venture activity.” Mitnick, *supra* note 16, at 31.

247. See Totty, *supra* note 2; see also *Roundtable on B2B Exchanges*, *supra* note 62, at 16 (comments of Professor Sunil Gupta) (“In the second stage [of B2B development], incumbents, such as GM and Ford, started their own exchanges largely in response to the exchanges created by the new players.”). The major automobile companies recently entered into their “Covisint” B2B joint venture for the design, manufacture and supply of automobiles. Barnett & Fanelli, *supra* note 121, at 2.

248. FTC STAFF REPORT, *supra* note 17, Introduction, at 1.

B2Bs and that the volume of such commerce will reach trillions of dollars within the next five years.<sup>249</sup>

Despite the increasing popularity of high technology joint ventures, the courts continue to struggle with their antitrust implications. Federal policy toward joint ventures has been termed "one of the darkest corners of antitrust law."<sup>250</sup> One commentator recently concluded that "[f]or over one hundred years, antitrust joint venture law has been a morass of confusion and ambiguity."<sup>251</sup> Robert Pitofsky, a former Chairman of the FTC, has remarked that "enforcement policy (and law) have almost certainly blocked, delayed, or raised the cost of legitimate [joint ventures]."<sup>252</sup> The courts and enforcement agencies have rendered confusing and conflicting opinions on the treatment of joint ventures.<sup>253</sup> Despite recent attempts to clarify joint venture analysis, the relevant standards "remain frustratingly vague."<sup>254</sup> This has been especially true for high technology joint ventures, which "present unusually difficult questions of fact because of the technical complexity of the products and services produced by new-economy industries."<sup>255</sup>

The courts' confusion has left practitioners and business executives uncertain as to the types of ventures and related competitive restraints that will pass antitrust muster. Indeed,

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249. *Id.* Certain commentators have stated that there are "now more than 1,000 B2B's, and they will do about \$720 billion in business in 2001." Bell & Adkinson, *supra* note 2, at 18. Another commentator has opined that B2B commerce may reach \$1.3 trillion by 2003. Shawn Young, *Tech Giants Brew Hefty B2B Venture*, USA TODAY, May 30, 2000, at B1; see also MAPI REPORT, *supra* note 33, at 3 ("Early in 2000, there were between 800 and 1,400 e-marketplaces or exchanges covering virtually every major industry in the U.S. economy.").

250. Joseph F. Brodley, *The Legal Status of Joint Ventures Under the Antitrust Laws: A Summary Assessment*, 21 ANTITRUST BULL. 453, 453 (1976); see also Ernest Gellhorn & W. Todd Miller, *Competitor Collaboration Guidelines—A Recommendation*, 42 ANTITRUST BULL. 851, 853 (1997) (noting that "the legal rules and policies applied to competitor collaborations are often confused and confusing").

251. Charles P. Weller, *A New Rule of Reason From Justice Brandeis' "Concentric Circles" and Other Changes in Law*, 44 ANTITRUST BULL. 881, 881 (1999); see also Donald I. Baker, *Compulsory Access to Network Joint Ventures Under the Sherman Act: Rules or Roulette?*, 1993 UTAH L. REV. 999, 1052-54 (1993) (describing the courts' approach to joint ventures as "the legacy of error and confusion").

252. Robert Pitofsky, *A Framework for Antitrust Analysis of Joint Ventures*, 74 GEO. L.J. 1605, 1605 (1986).

253. See *infra* notes 261-86 and accompanying text.

254. Edward Correia, *Joint Ventures: Issues in Enforcement Policy*, 66 ANTITRUST L.J. 737, 737 (1998).

255. Posner, *supra* note 20, at 936.

because of the uncertainty surrounding joint venture analysis, such arrangements have been treated more harshly than mergers, despite the fact that mergers have more serious anticompetitive effects.<sup>256</sup> There is no greater deterrence to capital investment in high technology markets than uncertainty. As one commentator has stated, "Uncertainty is a high-cost commodity. Indeed, the business community ... might find uncertainty more costly than clear and wrong rules."<sup>257</sup> Joint ventures are difficult to establish and maintain. Many such arrangements dissolve because of cultural differences between the parties, concerns about sharing competitive information, and disputes over management and control issues.<sup>258</sup> It has, in fact, been estimated that approximately sixty percent of joint ventures ultimately fail.<sup>259</sup> Firms will be even less willing to assume the risks of entering into efficiency-enhancing ventures if the relevant antitrust standards are unclear.<sup>260</sup>

The deficiencies in the courts' analysis of joint ventures stem from (1) their failure to develop a consistent standard for analyzing competitor collaborations under Section 1 of the Sherman Act, and (2) their confusion over whether to treat joint ventures as multiple or single entities.

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256. See Gellhorn & Miller, *supra* note 250, at 853-54 ("Even though they are less formal or permanent and probably more common and competitively less dangerous than outright mergers or acquisitions, joint ventures receive a more hostile reception in the agencies and courts.").

257. Joe Sims, *Developments in Agreements Among Competitors*, 58 ANTITRUST L.J. 433, 440 (1989).

258. See *Roundtable on B2B Exchanges*, *supra* note 62, at 15 (comments of Professor Sunil Gupta) (discussing such concerns of potential B2B partners).

259. Howard H. Chang et al., *Some Economic Principles for Guiding Antitrust Policy Towards Joint Ventures*, 1998 COLUM. BUS. L. REV. 223, 242-43. Another commentator has concluded that "seventy percent of alliances either fail outright, fall captive to shifting priorities, or achieve only initial goals, and ... fifty-five percent of alliances ... fall apart within three years of conception." STUART KLIMAN, VANTAGE PARTNERS, LLC, AVOIDING LITIGATION: CORPORATE COUNSEL'S ROLE IN ENSURING SUCCESSFUL ALLIANCE IMPLEMENTATION 1 (2000); see also Flaherty, *supra* note 118, at 4 (noting that "one-third to two-thirds of all alliances dissolve within a decade, depending on the industry").

260. See *Collaboration Guidelines*, *supra* note 111, ¶ 20,852 ("[A] perception that antitrust laws are skeptical about agreements among actual or potential competitors may deter the development of procompetitive collaborations.").

### *1. Inconsistent Standards for Section 1 Restraints*

During the last several years, the courts' analysis of competitor collaborations has become more confused than ever as they have struggled to replace the rigid rules of the past with a more flexible approach. Traditionally, Section 1 analysis had been cleft into two diametrically opposed standards: a "per se rule," under which clearly anticompetitive restraints were deemed illegal on their face without any inquiry into their actual competitive effects, and a "rule of reason," under which the courts felt compelled to inquire into all conceivable economic circumstances before finding a restraint illegal.<sup>261</sup> The per se rule was ascendant during the activist antitrust era of the 1960s.<sup>262</sup> However, beginning in the late 1970s, the federal courts began to adopt a more economics-oriented approach to antitrust analysis, and they became progressively more disillusioned with the rigidity of the per se rule. In a series of decisions between 1977 and 1986, the Supreme Court cut back on the breadth of the per se rule and expanded the circumstances in which the rule of reason would apply. For example, in *BMI*, the Court declined to apply the per se rule to a blanket copyright license developed by an association representing approximately 20,000 music copyright owners.<sup>263</sup> Conceding that the license constituted price fixing "in the literal sense,"<sup>264</sup> the Court nevertheless concluded that the license should be judged under the rule of reason. The Court pointed out that, given the virtual impossibility of "thousands of individual negotiations," the blanket

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261. See Thomas A. Piraino, Jr., *Reconciling the Per Se and Rule of Reason Approaches to Antitrust Analysis*, 64 S. CAL. L. REV. 685, 685-88 (1991) (describing per se and rule of reason conduct).

262. By the late 1960s, the Supreme Court had applied the per se rule to horizontal price fixing, *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 151 (1940), tying arrangements, *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 2 (1958), horizontal territorial and customer allocations, *United States v. Sealy, Inc.*, 388 U.S. 350, 355 (1967), group boycotts, *United States v. Gen. Motors Corp.*, 384 U.S. 127, 145 (1966), and vertical restrictions imposed by a supplier on its distributors, *United States v. Arnold, Schwinn & Co.*, 388 U.S. 365 (1967), *overruled by Cont'l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36 (1977).

263. *BMI v. CBS, Inc.*, 441 U.S. 1 (1978).

264. *Id.* at 8-9.

license made it possible for the members of the association to compete in the market for musical compositions.<sup>265</sup>

The expanded use of the rule of reason, however, created its own problems. The courts never adequately explained how the rule of reason should be applied. Most courts simply recited a long list of factors without indicating the relevance or weight to be afforded any particular factor.<sup>266</sup> The absence of clear standards makes it difficult to predict the outcome of rule of reason cases. If all economic conditions must be considered, the courts presumably must inquire into the market power of the parties to the restraints before ruling on their legality. Such an inquiry requires a determination of the relevant product and geographic markets and the shares of these markets held by the parties. Determining market definition and market shares can be a "formidable undertaking," involving a fact-intensive inquiry of the parties and their principal competitors.<sup>267</sup> That determination can be particularly difficult in high technology markets, in which market shares and market boundaries can change quickly and the technical sophistication of the relevant products often confuses the fact finders.<sup>268</sup> Indeed, most judges and juries are simply not capable of making the economic decisions required by a full rule of reason market power analysis.<sup>269</sup>

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265. *Id.* at 20; see also *FTC v. Indep. Fed'n of Dentists*, 476 U.S. 447 (1986) (applying rule of reason to refusal by association of dentists to supply their patients' x-rays to insurance companies); *Northwest Wholesale Stationers, Inc. v. Pac. Stationery & Printing Co.*, 472 U.S. 284 (1985) (applying rule of reason to decision by purchasing cooperative to expel one of its members); *NCAA v. Bd. of Regents*, 468 U.S. 85 (1984) (applying rule of reason to limits imposed by NCAA on the number of times its member colleges could appear on television); *Cont'l T.V., Inc.*, 433 U.S. at 36 (applying rule of reason to location restrictions imposed by television manufacturer upon its distributors).

266. The classic formulation of the rule of reason, set forth by Justice Brandeis in *Chicago Bd. of Trade v. United States*, 246 U.S. 231 (1918), includes such factors as the circumstances peculiar to the defendant's business, the conditions before and after the restraint, the nature and purpose of the restraint, and the competitive effects of the restraint. *Id.* at 238. Subsequent Supreme Court cases failed to refine this open-ended formula. See, e.g., *Cont'l T.V., Inc.*, 433 U.S. at 49 n.15 (1977) (citing Justice Brandeis' formula).

267. *Correia*, *supra* note 254, at 752.

268. See Posner, *supra* note 20, at 936-37 (observing that "cases in the new economy present unusually difficult questions of fact because of the technical complexity of the products and services produced by new-economy industries").

269. See *supra* notes 126-28 and accompanying text.

The problems with the *per se* rule and the rule of reason prompted the courts and enforcement agencies to search for an intermediate approach to antitrust analysis. The courts and agencies recently adopted a variation called the “quick look.” Under the quick look, the plaintiff need merely prove that a restraint is of a type that is likely to have anticompetitive effects.<sup>270</sup> After such a showing, the burden of proof shifts to the defendant to demonstrate a procompetitive justification for the restraint.

The cases adopting the quick look failed to explain when the *per se* rule, the rule of reason, or the quick look should be used to analyze a particular restraint.<sup>271</sup> The Supreme Court attempted to clarify the issue in 1999, in *California Dental Assoc. v. FTC*.<sup>272</sup> At issue were advertising restrictions imposed by an association of dentists. The FTC found the restrictions illegal under the quick look. The Supreme Court, however, concluded that a quick look approach was not appropriate. Instead, under a “less quick look,” the Commission should have considered the potential benefits of the dentists’ limitations on certain types of advertising.<sup>273</sup> Concluding that “the quality of proof required [for competitors’ collaborations]

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270. See, e.g., *Law v. NCAA*, 134 F.3d 1010, 1020 (10th Cir. 1998) (“Where a practice has obvious anticompetitive effects ... there is no need to prove that the defendant possesses market power.”); *United States v. Brown Univ.*, 5 F.3d 658, 673-78 (3d Cir. 1993) (employing a truncated analysis for agreements among universities on financial aid offerings); *U.S. Healthcare, Inc. v. Healthsource, Inc.*, 986 F.2d 589, 593-94 (1st Cir. 1993) (explaining the plaintiff’s advantage in having a reduced burden of proof); *Lie v. St. Joseph Hosp.*, 964 F.2d 567, 569 (6th Cir. 1992) (stating that a truncated rule of reason analysis applies “when the agreement at issue is very similar to *per se* violations and might, but for prudential constraints, be analyzed under the *per se* presumption”); *In re Mass. Bd. of Registration in Optometry*, 110 F.T.C. 549 (1988) (using quick look to analyze advertising restrictions imposed by an association of optometrists).

271. The enforcement agencies’ attempts to define when the quick look should apply have been no more successful. The agencies’ definitions range from “inherently suspect” conduct in the FTC’s *Massachusetts Board* decision, *Massachusetts Board of Registration*, 110 F.T.C. at 604, to agreements that directly “restrict competition” in the approach advocated by the Department of Justice, see Joel I. Klein, *A Stepwise Approach to the Antitrust Review of Horizontal Agreements 2*, Address Before the ABA Antitrust Section (Nov. 7, 1996), available at <http://www.usdoj.gov/atr/public/speeches/jikaba.htm>, to restraints that have a “clear likelihood of anticompetitive harm” in the *Collaboration Guidelines* jointly issued by the FTC and the DOJ. *Collaboration Guidelines*, *supra* note 111, ¶ 20,853. These differing formulations give little guidance to judges, juries, or litigants on the legality of particular conduct.

272. 526 U.S. 756 (1999).

273. *Id.* at 781.

should vary with the circumstances,<sup>274</sup> the Court explicitly recognized the proposals of certain commentators, including this author, that Section 1 analysis should constitute a continuum, allowing for different levels of scrutiny depending upon the restraint at issue.<sup>275</sup> The Court, however, left a critical gap in its analysis when it failed to explain how particular restraints should be classified on the Section 1 continuum. The Court simply stated that no categorical line can be "drawn between restraints that give rise to an intuitively obvious inference of anticompetitive effect and those that call for more detailed treatment."<sup>276</sup>

*California Dental* thus added its own layer of confusion to the analysis of collaborations among competitors. After *California Dental*, antitrust practitioners can no longer advise their clients, with any degree of certainty, whether such arrangements will be analyzed under the per se rule, the quick look, the less quick look, or the traditional rule of reason.<sup>277</sup>

## 2. Confusion Over Analyzing Joint Ventures as Single or Multiple Entities

There is a fundamental disagreement among the federal courts about whether joint ventures should be treated for antitrust purposes as single entities or as associations of independent competitors. The distinction between the multiple and single entity approaches is critical. If joint ventures are deemed to be associations of independent competitors, competitive restraints among the parties may violate Section 1 of the Sherman Act, which prohibits "[e]very contract, combination ... or conspiracy, in restraint of

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274. *Id.* at 780 (quoting PHILLIP AREEDA, ANTITRUST LAW ¶ 1507 (1986)).

275. *Id.* at 780 n.15 (citing William Kolasky, *Counterpoint: The Department of Justice's "Stepwise" Approach Imposes Too Heavy a Burden on Parties to Horizontal Agreements*, 12 ANTITRUST, Spring 1998, at 41, 43; Thomas A. Piraino, Jr., *Making Sense of the Rule of Reason: A New Standard for Section 1 of the Sherman Act*, 47 VAND. L. REV. 1753, 1771 (1994)).

276. *Id.* at 780-81.

277. The enforcement agencies have been unable to clarify the standards of *California Dental*. Indeed, the agencies' *Collaboration Guidelines*, like *California Dental*, give little guidance as to how particular joint ventures should be treated. The *Collaboration Guidelines* merely repeat the Supreme Court's admonition in *California Dental* that the analysis of joint ventures should vary "depending on the nature of the agreement and market circumstances." *Collaboration Guidelines*, *supra* note 11, ¶ 20,856.

trade.<sup>278</sup> Under such an approach, the courts could preclude joint venture partners from agreeing to limit competition among themselves by, for example, restricting the output or fixing the prices of the venture's products. However, if a joint venture were deemed to be a single entity, such restraints could not violate Section 1, because the requisite plurality of actors would not be present.

The single versus multiple entity debate has arisen most frequently in the context of sports leagues. A league's rules often include restrictions on several aspects of non-athletic competition among teams, such as relocation, expansion, free agency, television appearances, and the "draft" of amateur players. In several cases, these restrictions have been challenged under Section 1 as illegal conspiracies among teams. Some courts have found such restrictions illegal, concluding that the teams within a professional sports league compete in an economic as well as athletic sense and thus should be liable under Section 1 for implementing restrictions on such competition.<sup>279</sup> Other courts, however, have concluded that the cooperation among teams in a sports league is so pervasive that the teams should not be regarded as economic competitors at all. Under this view, the professional sports leagues have been deemed single entities whose members are incapable of conspiring in violation of Section 1.<sup>280</sup>

The Supreme Court itself has taken an inconsistent approach to the issue of whether sports leagues should be treated as single entities or as groups of competitors. In *NCAA v. Board of Regents*,<sup>281</sup>

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278. 15 U.S.C. § 1 (1997).

279. See, e.g., *Los Angeles Mem'l Coliseum v. NFL*, 726 F.2d 1381, 1387-90 (9th Cir. 1984); *N. Am. Soccer League v. NFL*, 670 F.2d 1249, 1255 (2d Cir. 1981); *Smith v. Pro Football, Inc.*, 593 F.2d 1173, 1179 (D.C. Cir. 1979); *Robertson v. NBA*, 389 F. Supp. 867, 891-96 (S.D.N.Y. 1975).

280. See *Seattle Totems Hockey Club v. NHL*, 783 F.2d 1347, 1350 (9th Cir. 1986) (rejecting plaintiffs' claim that they were illegally denied entry to NHL on grounds that they were "not competing with the NHL; [but] they were seeking to join it"); *Mid-South Grizzlies v. NFL*, 720 F.2d 772, 787 (3d Cir. 1983) ("There is no record evidence that professional football teams ... compete ...."); *Smith v. Pro Football, Inc.*, 593 F.2d 1173, 1178-79 (D.C. Cir. 1978) ("[T]he NFL clubs which have 'combined' to implement the draft are not competitors in any economic sense."); *San Francisco Seals, Ltd. v. NHL*, 379 F. Supp. 966, 970 (C.D. Cal. 1974) ("[NHL member clubs] are not competitors in the economic sense in this relevant market. They are, in fact, all members of a single unit ....").

281. 468 U.S. 85 (1984).



the Court took a multiple entity approach. The Court held that the NCAA could not limit the number of times each of its member schools' teams could appear on television. The Court emphasized that the NCAA colleges competed against each other for television revenues, fans, and athletes.<sup>282</sup> In *Brown v. Pro Football, Inc.*,<sup>283</sup> however, a case involving the non-statutory labor antitrust exemption,<sup>284</sup> the Court concluded that the members of the NFL are "more like a single bargaining employer,"<sup>285</sup> because "the clubs that make up a professional sports league are not completely independent economic competitors, as they depend upon a degree of cooperation for economic survival."<sup>286</sup>

### *B. Resolving the Deficiencies of Joint Venture Analysis*

The courts can resolve both the single versus multiple entity debate and the issues left open in *California Dental* by separately considering the legality of (1) high technology joint ventures themselves, (2) any restraints on competition implemented by joint venture partners, and (3) any exclusionary conduct undertaken by joint ventures with monopoly power.

#### *1. Analyzing the Legality of Joint Ventures*

In the first step of their analysis, the courts can concentrate on any anticompetitive effects likely to result from the mere fact of the parties' collaboration. This will allow the courts to clarify what *California Dental* left unresolved: that is, the degree of inquiry necessary to confirm the legality of particular collaborations among competitors. The courts should establish a continuum under which the degree of analysis will vary depending upon the purpose of the joint venture at issue. Most high technology joint ventures do not pose a threat to competition. Indeed, the courts can establish

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282. *Id.* at 99.

283. 518 U.S. 231 (1996).

284. This exemption allows collective bargaining agreements to include certain "competition-restricting agreements" without running afoul of the Sherman Act. *Id.* at 236-37.

285. *Id.* at 249.

286. *Id.* at 248 (citing *NCAA*, 468 U.S. at 101-02).

“safety zones” of conclusive legality for any joint ventures that are not intended to combine their partners’ market power at the downstream production or marketing stages. In high technology markets, most joint ventures either involve upstream activities—such as standards-setting, research and development, or purchasing collaborations—or the production or marketing of new products.<sup>287</sup> Because none of these joint ventures affect the pricing or output of current products, they can have no adverse economic effect. Their only effect is beneficial. Thus, the courts can approve such ventures without any analysis of their economic effects. Since judges and juries are not very good at judging the competitive effects of high technology products, this approach will avoid the risk of precluding efficiency enhancing arrangements. In most cases, the outcome of the competitive analysis will be apparent, and there will be no reason to undertake the difficult effort of establishing anticompetitive effects, as in traditional rule of reason cases.

Only in the rare case of downstream production and marketing joint ventures for current products will the courts have to engage in any additional inquiry. The courts would have to determine whether the beneficial effects of such ventures outweighed their anticompetitive effects. Even in such cases, however, the courts’ approach need not be as complicated as under the traditional rule of reason. The courts can simplify their analysis by adopting a market power threshold. Since joint ventures are less anti-competitive than mergers,<sup>288</sup> the courts should permit any production or marketing joint ventures whose parties have a collective market share below the threshold that would be acceptable for a merger. Given the potential efficiencies of joint ventures, the courts could justify a market power threshold for joint ventures as high as fifty percent.

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287. Joint ventures involving current products at the downstream stage of the production cycle are rare, because firms are more likely to acquire competing product lines than to enter into joint venture for their production or sale. Most firms would prefer to control the production and sale of their current products rather than to share such decisionmaking with their competitors.

288. See *supra* notes 110-11 and accompanying text.

## 2. *Analyzing Restraints Among Joint Venture Partners*

After a court determines that a high technology joint venture poses no threat to competition in and of itself, it should consider the legality of any competitive restraints implemented by the joint venture partners as well as any monopoly conduct undertaken by the joint venture. Such an analysis would resolve the single versus multiple entity debate by recognizing that the choices between a multiple and single entity approach need not be mutually exclusive. The courts would treat joint ventures as single entities when they attempted to perpetuate their monopoly power and as associations of independent competitors when their partners pursued their own competitive interests. As one commentator has explained, "A joint venture is both an economic actor in its own right and a collaboration of its participants."<sup>289</sup> A joint venture can engage in conduct designed to perpetuate or extend its own monopoly power in one market, and at the same time, act as a vehicle for its partners to collude among themselves to restrict competition in other markets.

Under the proposed approach, the parties would not be shielded from liability under Section 1 simply because they had entered into a legitimate joint venture. The shareholders of a corporation could not escape antitrust scrutiny if they conspired to fix prices in areas outside the markets served by the corporation. The courts should be no less willing to preclude the independent competitive acts of joint venture partners. For example, if the members of a B2B purchasing joint venture agree to charge uniform prices for their products, the price fixing arrangement should not be exempt from liability merely because its participants happened to have formed a B2B. Under the proposed approach, the courts would preclude such restrictions as naked restraints of trade among the joint venture partners.<sup>290</sup>

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289. Werden, *supra* note 109, at 704.

290. In *United States v. VISA U.S.A., Inc.*, 163 F. Supp. 2d 322 (S.D.N.Y. 2001), the court recognized that joint venture partners should not be able to use their venture as a shield against Section 1 liability. The court struck down bylaws of the Visa and MasterCard credit card systems that prohibited member banks from issuing competing credit cards. If the court had followed a single entity approach, the output restrictions would have escaped antitrust scrutiny altogether because, lacking monopoly power, neither the Visa nor the MasterCard joint venture could have been liable for engaging in anticompetitive conduct under Section 2 of the Sherman Act. However, the court concluded:

The “ancillary restraints doctrine,” first developed in the late nineteenth century, provides a precedent for considering the legality of any competitive restraints separately from the legality of the joint venture to which they are related. The doctrine was first established in the 1898 case, *United States v. Addyston Pipe & Steel Co.*<sup>291</sup> In that case, Judge (later President and Chief Justice) William Howard Taft precluded a price fixing agreement among pipe manufacturers. In his decision, Taft distinguished between “naked” restraints, which should be illegal on their face because they are unrelated to any efficiency-enhancing integration, and “ancillary” restraints, which are permissible because they are necessary to promote the legitimate objectives of a cooperative arrangement.<sup>292</sup> For nearly eighty years, the federal courts neglected Judge Taft’s approach. In the last twenty years, however, the ancillary restraints doctrine has re-emerged in the lower federal courts, as they have begun to adopt a more sophisticated approach to antitrust analysis. In several cases, the federal circuit courts have separately examined competitive restraints among joint venture partners to determine whether they were necessary to promote a venture’s legitimate objectives.<sup>293</sup>

### 3. Analyzing the Conduct of Monopoly Joint Ventures

In the final step of their analysis, the courts should determine whether a joint venture holds monopoly power in its market. Of course, if the plaintiff cannot prove that a joint venture has such

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If Visa and MasterCard were traditional for-profit stock companies, an agreement among competitors not to deal with a supplier would constitute a *per se* illegal group boycott.... Defendants’ members should not be able to accomplish via association rules what they would clearly be barred from doing in any other context.... ‘[J]oint ventures should not provide an organizational ruse for evading the antitrust laws.’

*Id.* at 401-02.

291. 85 F. 271 (6th Cir. 1898), *aff’d*, 175 U.S. 211 (1899).

292. *Addyston Pipe & Steel Co.*, 85 F. at 282-83.

293. *See, e.g.*, SCFC ILC, Inc., v. VISA U.S.A., Inc., 36 F.3d 958, 964 (10th Cir. 1994) (denial of membership in credit card system); *Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 210 (D.C. Cir. 1986) (noncompetition agreement among agents of Van Lines); *Nat’l Bancard Corp. v. VISA U.S.A., Inc.*, 779 F.2d 592 (11th Cir. 1986) (interchange fee among members of credit card system); *Polk Bros., Inc. v. Forest City Enters., Inc.*, 776 F.2d 185 (7th Cir. 1985) (noncompetition agreement between retailers); *L.A. Mem’l Coliseum v. NFL*, 726 F.2d 1381, 1389 (9th Cir. 1984) (NFL’s relocation restrictions).

power, a court's inquiry should end. Joint ventures with monopoly power have both the incentive and ability to engage in anti-competitive conduct. Such ventures should be liable under Section 2 when they engage in conduct designed to perpetuate or extend their monopoly. The integration that occurs in a joint venture creates a separate entity that is capable of acting in its own right, whether it be for purchasing, research and development, or marketing a particular product. In such cases, the joint venture is acting as a single entity rather than as a confederation of its participants.<sup>294</sup> When a joint venture pursues such activities, therefore, it can be assigned a single market share and treated as a single actor for purposes of antitrust analysis.<sup>295</sup> Joint ventures, like individual firms, are perfectly capable of implementing access restrictions, exclusive dealing arrangements, and other practices designed to perpetuate or extend their monopoly power. Such behavior is a particular threat in high technology markets, where monopoly power is so lucrative and long-lasting. The proposed approach would afford joint ventures no more leeway in pursuing such conduct than individual high technology monopolists.

The following sections describe how, under the proposed approach, the courts can judge the legality of (1) high technology joint ventures themselves, (2) competitive restraints among joint venture partners, and (3) monopoly conduct undertaken by joint ventures.

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294. Cf. *San Francisco Seals Ltd. v. NHL*, 379 F. Supp. 966, 970 (C.D. Cal. 1974) (holding that the National Hockey League is "a single unit competing as such with other similar professional leagues").

295. See Michael S. McFalls, *The Role and Assessment of Classical Market Power in Joint Venture Analysis*, 66 ANTITRUST L.J. 651, 664 (1998) ("Because the parties will, by definition, end all competition between themselves through the creation and operation of the joint venture, their collaboration can be assigned a single market share, as is done in merger analysis."). For cases applying such a single entity analysis, see *FTC v. Warner Communications, Inc.*, 742 F.2d 1156, 1159 (9th Cir. 1984) (granting preliminary injunction against an exclusive joint venture between two of the top six distributors of prerecorded music); *United States v. Ivaco, Inc.*, 704 F. Supp. 1409 (W.D. Mich. 1989) (enjoining joint venture that would have ended all price and output competition among the parties in the relevant market); *United States v. Columbia Picture Indus., Inc.*, 507 F. Supp. 412 (S.D.N.Y. 1980), *aff'd mem.*, 659 F.2d 1063 (2d Cir. 1981) (granting preliminary injunction against joint venture of four of top six motion picture companies designed to create premium pay television movie channel).

## VI. JUDGING THE LEGALITY OF JOINT VENTURES

The courts have sufficient experience with joint ventures to place them on a continuum according to their competitive purpose. In most cases, the parties' objectives for a venture should be a reliable indication of its likely impact on competition. Thus, the courts can use different degrees of inquiry depending upon a joint venture's place on the continuum. Upstream joint ventures designed for research and development, purchasing, or standards-setting will require the least analysis of all, whereas certain joint ventures at the downstream production and marketing stages will necessitate a more detailed competitive inquiry. Even at the downstream stages, however, the courts can simplify their analysis by foregoing any inquiry into the competitive effects of ventures designed to allow their partners to penetrate markets they could not have entered on their own.

### A. *Upstream Joint Ventures*

High technology joint ventures at the "upstream" level of the production process can be upheld on their face because their beneficial effects clearly outweigh any adverse effects on competition. Research and development, purchasing, and standards-setting joint ventures do not affect the parties' decisions on pricing and output, which are the critical competitive factors affecting consumer welfare.<sup>296</sup> At the same time, such joint ventures have obvious procompetitive effects. They promote innovation, reduce transaction costs, and frequently reduce the prices paid by consumers. Thus, the courts would gain little from a detailed inquiry into the economic effects of such collaborations.

Legitimate research and development joint ventures should be conclusively legal. There is, in fact, no evidence that research and development joint ventures have any real adverse competitive effects.<sup>297</sup> Economic studies have demonstrated no relationship

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296. See Thomas A. Piraino, Jr., *Reconciling Competition and Cooperation: A New Antitrust Standard for Joint Ventures*, 35 WM. & MARY L. REV. 871, 921-22 (1994) (explaining how research and development and purchasing joint ventures are removed from the stage at which pricing and output decisions are made).

297. Antitrust regulators have argued that research and development ventures may

between joint ventures and any decrease in overall research and development expenditures in relevant markets.<sup>298</sup> The efficiencies of high technology research and development joint ventures are obvious. Such ventures often allow smaller firms to participate in research projects in which they lack the wherewithal to pursue independently.<sup>299</sup> E-commerce research and development joint ventures can be particularly beneficial to consumers. B2Bs, for example, allow firms to design new products online in a collaborative fashion, reducing costs as well as the time required to bring a new product to market.<sup>300</sup>

Like research and development joint ventures, high technology purchasing joint ventures generate substantial efficiencies and have few, if any, adverse effects. Such ventures would also be deemed legal on their face under the proposed approach.<sup>301</sup> Purchasing

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reduce overall research and development efforts in the relevant market "for example, by slowing the pace at which R&D efforts are pursued." *Collaboration Guidelines*, *supra* note 111, ¶ 20,858. Thus, the *Collaboration Guidelines* take a less permissive approach to research and development joint ventures, providing for a "safety zone" for such ventures only when there are three or more "independently controlled research efforts in addition to those of the collaboration" in the relevant market. *Id.* ¶ 20,864. However, since the passage of the Sherman Act in 1890, the federal government has only challenged one research joint venture, and in that case, the parties were using the venture as a device to delay the development of a new technology that would have posed a competitive threat. *See United States v. Auto. Mfrs. Ass'n*, 307 F. Supp. 617 (C.D. Cal. 1969), *aff'd sub nom. City of New York v. United States*, 397 U.S. 248 (1970) (prohibiting four automobile manufacturers and their trade association from conspiring to delay the development of pollution control devices for automobiles). Indeed, conspiracies to prevent new technologies from development, however, do not constitute joint ventures at all, because they lack both the requisite integration of resources and the efficiency-enhancing objectives which are the hallmarks of joint ventures. Such arrangements amount to nothing more than naked cartels, and they should be per se illegal under traditional antitrust principles. *See supra* note 109.

298. Correia, *supra* note 254, at 759 n.82.

299. *See U.S. DEPT OF JUSTICE, RESEARCH JOINT VENTURES—1980*, 4 TR. REG. REP. (CCH) ¶ 13,120, at ¶ 20,654 (pointing out that individual firms may "lack the resources to finance independent research projects on a reasonably efficient scale" and that the risks involved in research may be "so high that the effort must be shared to make a research project practicable.").

300. *See FTC STAFF REPORT*, *supra* note 17, Part 2, at 12 ("B2B's also may facilitate collaborative conduct such as joint product design. 'Increased collaboration between supplier, buyer and customer reduces the time to develop, produce and distribute new products.'").

301. The courts have generally upheld purchasing joint ventures. Indeed, "[v]irtually every case finding joint buying unlawful ... has essentially involved a naked price fixing conspiracy." David A. Balto, *Business to Business Arrangements: Antitrust Concerns*, Presentation to 49th Annual Spring Meeting of ABA Section of Antitrust Law 8 (March 28-30, 2001) (on file with author). B2B purchasing joint ventures may harm suppliers by

collaborations allow competitors to centralize ordering, combine warehousing or distribution functions, and pool their bargaining power to reduce suppliers' prices. Most companies buy goods and services in amounts equal to more than one-half of their revenue.<sup>302</sup> By reducing their purchasing costs by only a small percentage, firms can generate substantial increases in their profits.<sup>303</sup> B2B purchasing joint ventures reduce purchasing costs by replacing "multistep, labor intensive operations" with a "single interactive electronic system."<sup>304</sup> Indeed, a panelist for the *FTC Staff Report* estimated that a "paper" transaction costing \$100 would only cost \$10 when conducted through a purchasing B2B.<sup>305</sup> Such cost savings are often passed on to consumers in the form of lower prices.<sup>306</sup>

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reducing their profit margins. See *Roundtable on B2B Exchanges*, *supra* note 62, at 12 (comments of John Paul MacDuffie, Wharton School, University of Pennsylvania) ("[S]econd-tier or third-tier suppliers are ultimately the ones that really get squeezed."). If a B2B possessed monopoly power over the purchases of a particular product, the B2B could use that power to reduce the price paid to suppliers below the level that would prevail in a competitive market. Under the proposed approach, however, the courts would examine such conduct separately to confirm whether the B2B, acting as a single entity, was violating Section 2 of the Sherman Act. Such conduct would constitute an improper exercise of "monopsony" power under Section 2 of the Sherman Act. See *infra* Part VIII.D.

302. MAPI REPORT, *supra* note 33, at 10.

303. IBM saved just under \$400 million in 2000 by moving its supplier relationships to the Web. Nicole Harris, *'Private' Exchanges May Allow B-to-B Commerce to Thrive After All*, WALL ST. J., Mar. 16, 2001, at B1. The Covisint B2B purchasing joint venture formed in 2000 by Daimler Chrysler, Ford, General Motors and several other automobile companies expects to generate cost savings of at least \$1000 per vehicle. John R. Wilke, *Green Light is Likely for Auto Parts Site*, WALL ST. J., Sept. 11, 2000, at A3. A B2B that includes more than fifty large retailers has reduced its participants' purchasing costs by twelve to fifteen percent, or a total of \$45 million, in less than a year of operation. Totty, *supra* note 2. Purchasing B2Bs allow smaller firms to obtain the types of quantity discounts usually available only to larger buyers. See *Roundtable on B2B Exchanges*, *supra* note 62, at 13 (comments of David J. Reibstein, Wharton School, University of Pennsylvania) ("[B2Bs are] gaining greater purchasing power for a very fragmented set of consumers."). A CEO of a small steel company has pointed out that "through use of a B2B he now has purchasing relationships with large suppliers who previously would not have even 'notice[d]' [him]." FTC STAFF REPORT, *supra* note 17, Part 2, at 6.

304. Bell & Adkinson, *supra* note 2, at 18.

305. FTC STAFF REPORT, *supra* note 17, Part 2, at 2.

306. DEPT OF JUSTICE & FED. TRADE COMM'N, STATEMENTS OF ANTITRUST ENFORCEMENT POLICY IN HEALTH CARE, 4 TRADE REG. REP. (CCH), ¶ 13,153, at ¶ 20,812 (1996) ("Most joint purchasing arrangements ... allow the participants to achieve efficiencies that will benefit consumers ....").



In addition to cost savings, purchasing B2Bs can generate other substantial efficiencies for their participants. A manufacturer can use a purchasing B2B for "supply chain management," informing its suppliers instantly of the number of components it expects to use each day and even every hour.<sup>307</sup> Some observers have estimated that the automobile manufacturers can eliminate up to \$100 billion in excess inventory through B2B supply chain management.<sup>308</sup> Manufacturers can also use purchasing B2Bs to facilitate their suppliers' design of new components. The automobile companies, for example, are joining with their suppliers in B2Bs to design components for new cars, saving the time and cost of faxing or mailing revisions.<sup>309</sup>

Like research and development or purchasing joint ventures, standards-setting organizations operate at the upstream level of the production process and have no direct effect on prices or output. They would also be deemed legal on their face under the proposed approach. Standards-setting joint ventures certify the competency of doctors, lawyers, accountants, engineers, and other professionals to practice their trade. Such ventures also may promulgate standards to ensure that all products in an industry meet certain minimum requirements for safety and interoperability. Standards-setting organizations can, of course, engage in illegal conduct. A group of competitors could, for example, establish arbitrary standards that have no purpose other than to prevent new firms from entering the market.<sup>310</sup> However, under the approach proposed in this Article, the courts would separately consider the legality of such conduct and could preclude the conduct without invalidating

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307: "[S]haring information quickly with supply chain partners ... [allows] them to seamlessly adjust to changing market conditions." MAPI REPORT, *supra* note 33, at 5.

308. Lee Gomes, *Words from a Believer*, WALL ST. J., May 21, 2001, at R21 (quoting Mark Hoffman, Chief Executive Officer of Commerce One). This ability has become more important as firms have begun to outsource a greater portion of their manufacturing activity. General Motors and Ford now outsource thirty to fifty percent of their total vehicle content. *Roundtable on B2B Exchanges*, *supra* note 62, at 9 (comments of Professor Sunil Gupta). Cisco does not even make most of its products, and Hewlett Packard and IBM are also engaged in substantial outsourcing. *See id.* (describing Cisco's experience); Harris, *supra* note 303 (describing IBM and Hewlett Packard).

309. Totty, *supra* note 2.

310. *See, e.g.,* *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 364 U.S. 656, 659-60 (1961) (precluding industry standards-setting organization from denying "seal of approval" to competitor for arbitrary reasons).

the entire venture. Most standards-setting joint ventures act in a manner beneficial to consumers. Indeed, network markets could not operate efficiently without a single standard of interchange.<sup>311</sup> If such standards are openly disclosed, they can promote competition by making it easier for several firms to supply the relevant network services.<sup>312</sup> There are, in fact, examples of network industries in which competition exists because standards-setting joint ventures have established non-proprietary standards openly accessible to all firms. Walt Disney, Sony, Warner Bros., and Paramount Pictures are currently considering a joint venture that would establish standards for digital film equipment for movie theaters. The standards would allow rival manufacturers to compete in supplying compatible equipment.<sup>313</sup> Courts have no reason to preclude ventures with such a potential beneficial effect in the relevant market.

## *B. Downstream Joint Ventures*

### *1. Production Joint Ventures*

Joint ventures at the production level eliminate downstream competition in the output of goods and services. Nevertheless, in certain cases, such ventures can be upheld on their face. A production joint venture may allow its partners to produce a product or service that they could not have produced on their own. Such ventures facilitate the type of long-term capital investments that spur productivity. Regardless of the parties' market power, the only competitive effects of such a venture are beneficial. Consider a recent production joint venture between Intel and Hewlett-

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311. See Balto, *supra* note 87, at 279 (observing that "without agreement on technical interface standards, ... networks cannot be formed").

312. See *id.* (noting that "competitors could agree on the standards to be met, preserving competition within the network").

313. Anna Wilde Matthews & Bruce Orwall, *Major Studios Discuss Plan to Equip Theaters to Show Digital Films*, WALL ST. J., May 17, 2001, at A1; see also Posner, *supra* note 20, at 928 (giving example of how uniform standards for the international telephone system allow components to be supplied "by a vast number of separate firms and individuals"). There are other examples of markets in which standards-setting joint ventures allow for competing products, including computer games (with Sega, Nintendo, and Sony as competitors), mainframe computing (IBM and DEC), fax machines, televisions and VCRs. See Rubinfeld, *supra* note 33, at 863-64 (citing examples).

Packard for the production of an entirely new type of micro-processor for computer servers. The construction costs of micro-processor manufacturing plants can exceed \$1 billion. By sharing their resources, the parties were able to produce a computer chip that neither party could have produced on its own.<sup>314</sup>

The proposed approach would encourage the formation of production joint ventures to build the broadband telecommunication networks that will be required to meet the demand for Internet services in the next several years. Like cable networks, fiber optic networks have the ability to carry a broad range of information at speeds necessary for the new game, music, and video services now available on the Web. During the 1990s, cable companies, long distance telephone companies, and local Bell telephone companies embarked upon an ambitious program to construct national fiber optic networks. However, these networks were designed primarily for business customers.<sup>315</sup> For the most part, telecommunications companies neglected to upgrade the "last mile bandwidth" to consumers' homes.<sup>316</sup> Delay in hooking up a high-speed version of the Internet to homes is holding up adoption of a vast array of new applications, including audio and TV-quality video.<sup>317</sup> Indeed, most

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314. See David P. Hamilton, *Gambling It Can Go Beyond PC, Intel Offers a New Microprocessor*, WALL ST. J., May 29, 2001, at A1. ("H-P decided it needed a partner that could share the financial burden and help sell the chip to other computer makers, possibly making it an industry standard.")

315. *Why the Possible Sale of AT&T Broadband Spooks 'Content' Firms*, WALL ST. J., Aug. 27, 2001, at A1; Schiesel, *supra* note 72, at 1. It has been estimated that "[i]n 1999 and 2000, over 150 million kilometers of optical fiber were laid world wide, enough to stretch to the sun." George Gilder & Bret Swanson, *The Broadband Economy Needs a Hero*, WALL ST. J., Feb. 23, 2001, at A14. As a result of this "network-building spree," many networks are now operating at less than fifty percent of capacity. Mark Heinzl, *Broadband Carriers Are Hunting for "Killer Apps,"* WALL ST. J., June 14, 2001, at B10.

316. See Mark Heinzl, *All-Optical Telecom Network Faces Slowing Economy, Excess Capacity*, WALL ST. J., Feb. 23, 2001, at B1 (referring to "the old copper wiring that carries phone and data calls the 'last mile' to most houses and small office buildings"). In a recent editorial, the *Wall Street Journal* opined that "the slothful deployment of broadband has played a significant role in Nasdaq's struggles of late and the dot-com skid in general." *Space Invaders*, WALL ST. J., June 5, 2001, at A26. Two commentators recently explained that "the Internet as we know it is about seven years old, yet fewer than 7 million of 100 million American homes enjoy broadband." Gilder & Swanson, *supra* note 315.

317. See Rick Kailgaard, *Gotta Be Wireless*, FORBES, May 14, 2001, at 51 (explaining how delay in the linking of broad bandwidth directly to consumers is "holding up the next generation of Internet software, which requires streaming audio and TV-quality video"); see also Daniel Akst, *In Technology, Supply Precedes Demand*, N.Y. TIMES, Sept. 2, 2001, § 3

consumers are already waiting inordinate periods to access the Internet.<sup>318</sup> Fiber optic networks would provide consumers with an alternative to cable for high-speed Internet access. The costs of constructing such networks, however, are prohibitive for most telecommunications firms. Even AT&T, with its vast financial resources, is not capable of building such a network on its own.<sup>319</sup> Certainly the cable companies, which are currently laboring "under mountains of debt," do not have such capacity.<sup>320</sup> Only by joining together in a production joint venture could the local and long distance telephone companies and cable firms obtain the financial wherewithal to extend their fiber optic networks to consumers. Joint ventures designed to construct such networks should be permitted regardless of the parties' market power because they would add a competitor to the relevant market that otherwise would not exist.<sup>321</sup>

Not all production joint ventures, however, have such a benign competitive effect. Partners engaged in production joint ventures that cover goods or services already produced by the parties will refrain from competing with their own joint venture because such competition merely reduces the parties' profits as members of the venture. Thus the courts must engage in some inquiry into the competitive effects of production joint ventures for current products.

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(Money & Business), at 4 ("[T]he vast new fiber optic network will ... call forth unforeseen new applications ... once high-capacity networks overcome the last-mile bottleneck.").

318. The average wait in December 2000 was eighteen seconds. Thomas E. Weber, *Will Potholes Develop if Information Highway Slows?*, WALL ST. J., Jan. 22, 2001, at B1; see also *Space Invaders*, WALL ST. J., June 5, 2001, at A26 (referring to "America's thirst for broadband access"). According to one author:

The agonizingly slow deployment of broadband has stopped the Internet in its tracks. The technology for fast connections is well established, but 19 out of 20 U.S. families are stuck with poky dial-up modems, so that it takes them an hour to download a video file that broadband could handle in two minutes.

James K. Glassman, *Broadband Failure has a Political Cause*, WALL ST. J., June 21, 2001, at A18.

319. See Deborah Solomon, *Under Rising Pressure, AT&T's CEO Tries to Hold on to an Icon*, WALL ST. J., Nov. 16, 2001, at A1 ("[T]he company, with a current market value of \$60 billion, is struggling to find ways to pay off its \$36.5 billion in debt.").

320. Karlgard, *supra* note 314, at 51.

321. See Thomas A. Piraino, Jr., *A Proposed Antitrust Analysis of Telecommunications Joint Ventures*, 1997 WIS. L. REV. 639, 687-89 (discussing how production joint ventures among telecommunications firms can benefit consumers).

The courts can simplify their analysis of such production joint ventures by establishing a market share threshold for their legality. If the parties to a production joint venture collectively hold less than fifty percent of the joint venture product market, the venture should not pose a serious competitive threat.<sup>322</sup> The other competitors in the market should be able to prevent the venture from limiting overall output in a way harmful to consumers. Only when a production joint venture exceeds the fifty percent threshold should a court have to balance its potential efficiencies against its adverse effects, and even in such cases, the courts need not pursue an approach as complex as the traditional rule of reason. In many cases, the net beneficial effect of a production joint venture will be obvious from its purpose. If a production joint venture is of limited scope, its efficiencies will usually outweigh its adverse effects.<sup>323</sup> Consider, for example, a joint venture among the major motion picture studios to finance the production of a single new digital film. The studios might use the venture to learn from each other the most efficient means of producing films in a digital format. The studios' collaboration on the one film should not induce them to compete any less aggressively in producing other films. The joint venture's beneficial purpose—facilitating the production of new digital films—outweighs any adverse effects that might result from the studios' collaboration. However, production joint ventures of broad scope should be precluded. The courts, for example, should

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322. Some commentators have suggested even lower market share thresholds for joint ventures. See, e.g., Gellhorn & Miller, *supra* note 250, at 868 (advocating thirty percent market share threshold). The *Collaboration Guidelines* establish a twenty percent market share threshold for competitor collaborations. *Collaboration Guidelines*, *supra* note 111, ¶ 20,864. The government's guidelines for health care joint ventures provide safe harbor protection for health care joint ventures up to the thirty-five percent level, and the government's merger guidelines indicate that the enforcement agencies would not be concerned about a merged entity with less than thirty-five percent of the relevant market. Mitnick, *supra* note 16, at 33.

323. The FTC's analysis of the 1984 production joint venture between Toyota and General Motors is instructive. The FTC recognized that such a downstream venture between the first and third largest automobile manufacturers in the world could have an adverse effect on competition. *General Motors Corp.*, 103 F.T.C. 374, 386-87 (1984). However, the FTC also noted that such effects would be limited because the venture only covered the production of a single new automobile, and the parties were free to continue to compete in the marketing phase. *Id.* at 386. The limited adverse competitive effects of the venture were easily outweighed by the efficiencies that could result from the parties' integration of their production capacity. *Id.* The FTC emphasized in particular that General Motors would have the opportunity to learn more efficient Japanese manufacturing techniques. *Id.* at 387-88.

not permit the major motion picture studios to combine all of their film production operations in a joint venture. The cost savings and other synergies resulting from the integration of the studios' operations clearly would not outweigh the loss of competition that would occur as a result of the venture.

## 2. Marketing Joint Ventures

Marketing joint ventures have the greatest anticompetitive potential of all because they operate at the downstream level where the parties' business decisions most directly affect consumers.<sup>324</sup> Nevertheless, high technology marketing joint ventures should qualify for a conclusive presumption of legality when they facilitate the introduction of new products to the marketplace. In *BMI*, for example, the joint venture allowed the musical composers to market a product—a uniform copyright license for a wide range of compositions—that the composers could not market on their own.<sup>325</sup> Two recent marketing joint ventures among the major record companies may have a similar beneficial effect.<sup>326</sup> The joint ventures, formed in response to Napster's unauthorized use of the record companies' copyrighted music, allow their partners to license a broad range of online music to consumers for a monthly fee.<sup>327</sup> Similarly, certain B2B marketing joint ventures may create markets that otherwise could not exist. Idle, surplus, or perishable inventory, for example, often cannot be sold by customary means. Most sellers would not find it cost effective to disseminate information concerning such products to the necessary range of buyers and within the required period of time.<sup>328</sup> B2Bs make it possible to reach a wide range of buyers for such products before they become obsolete. The courts should uphold such marketing

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324. As the *Collaboration Guidelines* point out, marketing "collaborations may involve agreements [on price, output] or other competitively significant variables ... that can result in anticompetitive harm." *Collaboration Guidelines*, *supra* note 111, ¶ 20,858.

325. *BMI v. CBS, Inc.*, 441 U.S. 1, 20-22 (1978).

326. One joint venture, "Pressplay," is operated by Sony and Vivendi. The other joint venture involves AOL Time Warner, EMI Group, and Bertelsmann. Anna Wilde Matthews & John R. Wilke, *U.S. Investigates 2 Joint Ventures in Online Music*, *WALL ST. J.*, Aug. 6, 2001, at A3.

327. *See id.*; Holman W. Jenkins, Jr., *Living With Digital Piracy? It's Been Done Before*, *WALL ST. J.*, Aug. 22, 2001, at A17.

328. *See* FTC STAFF REPORT, *supra* note 17, Part 2, at 7 (describing how B2B's can be used to sell surplus inventory, perishable goods, excess bandwidth and excess trucking capacity).

joint ventures on their face, because they have no adverse competitive impact. Their only effect is to make new products available to consumers. It would serve no purpose for the courts to question the legitimacy of such a venture, even if it includes most of the participants in the relevant market.

A marketing joint venture poses a potential threat to competition when it involves current products that the parties could have sold independently. In the absence of such a venture, the parties presumably would have competed against each other, thus reducing the prices and increasing the output of the relevant products. The elimination of such competition will be particularly harmful to consumers when the joint venture parties together control more than fifty percent of the relevant market. Thus, the courts should balance the beneficial and adverse effects of such marketing joint ventures. It should not be difficult for the courts to complete such balancing. The potential efficiencies of most marketing joint ventures should be readily obvious. Certain types of integration, such as risk sharing or combinations of operations, serve as a good proxy for the procompetitive justifications of marketing joint ventures.<sup>329</sup> Integrated marketing joint ventures are capable of reducing marketing costs, eliminating duplication, and effecting synergies in the delivery of products to consumers. For example, by pooling the resources of several firms, B2Bs may allow smaller suppliers to access more customers than they could have reached on their own.<sup>330</sup>

The potential anticompetitive effects of a marketing joint venture will be evident from the scope and duration of the venture. If the joint venture is intended to last only for a limited time, the parties will be acutely aware of the need to protect their own competitive interests and may be less likely to use their collective market power to raise prices or limit output.<sup>331</sup> Marketing joint ventures of limited scope may not even affect their partners'

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329. Correia, *supra* note 253, at 758.

330. See FTC STAFF REPORT, *supra* note 17, Part 2, at 5 ("The CFO of a small steel company ... used a B2B e-marketplace ... to 'hook[]up with more than 50 new customers, 90% of whom he had never heard of before."); MAPI REPORT, *supra* note 33, at 11 ("[S]maller suppliers, with limited sale and marketing resources, are likely to participate in an electronic auction for contracts that were previously awarded to larger suppliers.").

331. As the *Collaboration Guidelines* point out, "In general, the shorter the duration [of a joint venture], the more likely participants are to compete against each other and their collaboration." *Collaboration Guidelines*, *supra* note 111, ¶ 20,862.

decision on pricing and output. For example, the major Hollywood studios recently formed two joint ventures to market films on demand over the Internet and cable television.<sup>332</sup> Consumers will be able to download the films to their computers and watch them at their convenience.<sup>333</sup> Because each studio will continue to control the price and availability of its own films,<sup>334</sup> the beneficial effects of the ventures (i.e., making a broader range of films available to consumers online) clearly outweigh any adverse effects resulting from the studios' collaboration.<sup>335</sup> The airlines' "Orbitz" online marketing joint venture is also limited in scope. Although the airlines participating in the venture control approximately eighty percent of domestic air travel,<sup>336</sup> the joint venture should be permitted because the parties do not delegate to the venture the authority to set fares.<sup>337</sup>

Marketing joint ventures of broader scope, however, would be precluded under the proposed approach. Ventures which exceed the fifty percent threshold and which have the power to set prices and/or reduce output rarely will generate sufficient efficiencies to survive the balancing test. Consider a hypothetical joint venture between a cable company and a local telephone company to provide broadband Internet services to a particular community. Assume

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332. One of the joint ventures, called "Movies.com," includes Walt Disney Co. and News Corp.'s Twentieth Century Fox. The other venture, called "Moviefly," includes Sony Corp., AOL Time Warner's film unit, Vivendi Universal's Universal Pictures, Viacom's Paramount Pictures, and Metro-Goldwyn Mayer, Inc. Anna Wilde Matthews, *Antitrust Probe Into Web-Video Ventures May Benefit From 1980's Cable-TV Case*, WALL ST. J. Dec. 24, 2001, at B6.

333. Bruce Orwall, *Five Studios Form Joint Venture for Video on Demand*, WALL ST. J., Aug. 17, 2001, at A3; Mathews, *supra* note 332.

334. Orwall, *supra* note 333.

335. The courts and agencies should also uphold recently announced joint ventures by the major record companies which are designed to market music over the Internet. *See id.* (referring to Justice Department investigation of such joint ventures).

336. Geewax, *supra* note 122.

337. *But see id.* (concluding that the Orbitz joint venture "likely will cause significant anticompetitive harm"). In mid-2001, the major domestic airlines discussed a possible joint venture to develop means for easing airport congestion and reducing flight delays. The venture would have allowed the airlines to agree on more efficient ways of scheduling flights at peak periods of demand. *U.S. House Bill Would Give Airlines Antitrust Immunity*, Dow Jones News Service, May 10, 2001 (on file with author). The U.S. House of Representatives considered a bill that would grant antitrust immunity to the airlines for the joint venture. *Id.* However, under the approach proposed in this Article, it would be unnecessary to grant such immunity. The courts could simply uphold the venture on the grounds that it is so limited in scope, and so obviously beneficial to consumers, that its predominant effect is procompetitive.



that the joint venture has the power to connect homes and businesses to the Internet and to set the prices for such service. The parties to the venture could argue that the venture would eliminate the duplicate costs of providing Internet service over both cable and telephone lines and would encourage its participants to assume the risk of constructing a new broadband system. Such efficiencies, however, would be outweighed by the adverse competitive effects of the venture, which would eliminate any possibility for competition between cable and telephone companies in providing Internet access to consumers in the communities served by the venture.<sup>338</sup>

## VII. ANALYZING RESTRAINTS AMONG JOINT VENTURE PARTNERS

Under the proposed approach, a court, after determining that a joint venture itself was permissible, would review any restrictions among the joint venture partners to determine whether they violate the prohibition in Section 1 against unreasonable restraints of trade. The courts' analysis of such restraints need not be as complex as under the traditional rule of reason. Once a court finds a joint venture proper, it can easily determine the appropriateness of any related restraints among the parties to the venture.<sup>339</sup> A court would not have to engage in any inquiry into the market power of

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338. In most areas, the local cable and telephone systems remain parallel monopolies. The four former "Bell" telephone companies—SBC Communications, BellSouth, Verizon, and Qwest—still hold monopoly power over local telephone service, and many cable networks are the sole source of such service in their markets. See Armstrong, *supra* note 69 (describing monopolies of former Bell companies); Sandburg, *supra* note 70 ("The Baby Bells and the cable-TV operators have the country pretty much to themselves, enjoying lucrative monopolies in most areas."). Only rarely have local telephone and cable networks been willing to compete in each other's markets. See Jared Sandburg, *An AT&T-Comcast Deal Could Set Back Telephone, Cable Convergence*, WALL ST. J., July 12, 2001, at B1 ("[The telephone and cable networks] size each other up, they dance around each other and they back up to their familiar corners.' The upshot for consumers: higher cable and local phone fees 'with no one in either market positioned to challenge or discipline them.'"). Furthermore, these companies have not been reluctant to exercise their monopoly power in ways adverse to consumers. As one commentator recently pointed out, "These protected industries preside over supposedly scarce resources, like wires to your home or spectrum, and charge accordingly." Andy Kessler, *Goodbye Lucent. Hello Wi Fi*, WALL ST. J., Apr. 9, 2001, at A28. The hypothetical marketing joint venture would only aggravate such problems. As a result of their collaboration, the local telephone and cable companies would have no incentive to compete in providing Internet services, and they would be even more likely to withhold innovations and extract monopoly prices for their current services.

339. Of course, if a joint venture is deemed illegal, any related agreements by the parties that limit competition should also be precluded without any further consideration.

the parties or other economic characteristics of the relevant market. It should simply consider whether such restraints are limited to the scope necessary to promote the venture's procompetitive purposes. Such restraints have no more adverse effect than the joint venture itself, and they do not extend the venture's competitive reach into other markets. The restraints would simply constitute internal rules for the joint venture's operation, and thus they could not be illegal under Section 1. If the restraints were disallowed, the venture would be unable to achieve its efficiency objectives.

The courts, however, should preclude restraints among joint venture partners which are broader than required to promote the venture's objectives. Such restraints should be deemed "naked" because they are unrelated to a venture's efficiency goals. Their only effect is to limit competition among the joint venture partners in another market. Since the parties would be acting as independent competitors rather than as joint venture partners, the restraints should be illegal under Section 1. Restraints which are unrelated to the efficiency objectives of a joint venture are similar in effect to cartels. Because such restraints have no legitimate purpose and serve only to limit competition, they should be precluded on their face, regardless of the parties' market power.<sup>340</sup> The only effect of such restraints is to limit competition among the joint venture partners in another market, and they should not escape liability simply because the conspirators happened to enter into a joint venture.

#### *A. Price Fixing Agreements*

Courts should allow price-fixing agreements among the members of a high technology joint venture when they are necessary to achieve the venture's legitimate objectives. Some marketing joint ventures are so broad that they could not meet their goals without the power to set prices. In *BMI*, the common price established by the musical composers was a critical aspect of the blanket license. Indeed, without an agreed price, the members'

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340. In *NCAA v. Bd. of Regents*, 468 U.S. 85 (1984), for example, the Supreme Court enjoined the defendant from limiting the number of times college football teams could appear on television. The Court emphasized that these restrictions were broader than required to further the NCAA's legitimate goal of promoting the efficient operation of collegiate athletics. *Id.* at 104-20.

musical compositions could not have been made available to consumers at all.<sup>341</sup> However, courts should not deem price-fixing agreements ancillary to marketing joint ventures of more limited scope. The FTC, for example, has charged that Warner Communications and Vivendi conspired to fix prices in connection with their joint venture to market compact discs and cassettes of the 1998 performance of "The Three Tenors."<sup>342</sup> In connection with the venture, the partners agreed not to discount certain of their other catalog products. Since this agreement had nothing to do with the legitimate purposes of the venture, it should be illegal as a naked price fixing agreement.<sup>343</sup>

Price-fixing agreements also are not ancillary to the legitimate efficiency objectives of purchasing, research and development, standards-setting, production, or other joint ventures upstream of the marketing stage. Such agreements unduly extend the anti-competitive scope of such ventures to downstream markets. Indeed, in upstream joint ventures, the partners' mere sharing of price or cost information may raise the inference of an illegal price-fixing agreement. The courts have precluded competitors from sharing such information because it helps firms to police price-fixing agreements by eliminating uncertainty over how competitors are pricing their products.<sup>344</sup> Such information-sharing can be a particular problem in upstream B2B joint ventures. Internet technology allows B2B participants to share information at an unprecedented rate.<sup>345</sup> The parties can learn, in real time, the

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341. *BMI v. CBS, Inc.*, 441 U.S. 1, 20-22 (1978).

342. *FTC Charges Music Distribution Joint Venture Restrained Trade*, TRADE REG. REP. (CCH) No. 693 (Aug. 1, 2001), at 1. The "Three Tenors" are opera singers Jose Carreras, Placido Domingo, and Luciano Pavarotti. *Id.*

343. As Joseph Simons, the Director of the FTC's Bureau of Competition, stated, "Naked price fixing agreements such as this ... cannot be immunized by mere association with an otherwise lawful joint venture .... Participation in a joint venture is not a license to fix prices on products outside of the joint venture." *Id.*

344. *See United States v. Container Corp.*, 393 U.S. 333, 337 (1969) (holding that an agreement to exchange information violates Section 1). The *Collaboration Guidelines* point out that competitors' sharing of price and cost information "may increase the likelihood of collusion...." *Collaboration Guidelines*, *supra* note 111, ¶ 20,859.

345. FTC STAFF REPORT, *supra* note 17, Executive Summary, at 2. The *FTC Staff Report* commented on the adverse results of the pricing transparency that can occur in B2Bs: "Eliminate the uncertainty, and participants will tend to move away from individual profit maximizing models to a collusive one." *Id.*, Part 3, at 6. Indeed, the risk of collusion may increase with the development of "peer-to-peer" ("P2P") computing, which will allow vast numbers of users to communicate directly with each other in real time without a central

identities of the purchaser and seller in a transaction, the quantity purchased, the date and time of the transaction and the purchase price, as well as the production capacity of other B2B participants.<sup>346</sup> The partners can use such ventures to signal anticipated price changes and gain their competitors' tacit agreement to the changes.<sup>347</sup> Some observers, for example, have argued that the Orbitz joint venture could allow the participating airlines to monitor implicit price-fixing arrangements.<sup>348</sup> Thus, to avoid antitrust liability, the partners to upstream B2Bs should construct "firewalls" to ensure that the employees participating in the ventures do not have access to information on their competitors' prices, output, or costs.<sup>349</sup> In most cases, the partners to such joint ventures have no need to know such information in order to operate the venture efficiently.

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server. Charles T. C. Compton & Scott A. Scher, *Peer-to-Peer Computing: Antitrust Questions for a Fledgling Technology 3*, Presentation to the 49th Annual Spring Meeting of the ABA Section of Antitrust Law 3 (Mar. 28-30, 2001) (on file with author). Under P2P protocols, central servers will no longer "act as 'gatekeepers' for sensitive data." *Id.* This will allow rivals to directly communicate sensitive competitive data to each other.

346. FTC STAFF REPORT, *supra* note 17, Executive Summary, at 3; Rule et al., *B2B or Collusion?*, LEGAL TIMES, Apr. 3, 2000, at 36.

347. "The Federal Trade Commission is already looking at the Ford, GM and Daimler-Chrysler exchange to determine if the structure lends itself to unlawful price signaling or coordination among buyers or sellers." Clare Ansberry, *Let's Build an Online Supply Network*, WALL ST. J., Apr. 17, 2000, at B10. In expressing their concern over information-sharing in Internet joint ventures, the enforcement agencies have cited a 1994 consent agreement involving airlines' alleged price signaling in a computerized fare publication venture. See JONES, DAY, REAVIS & POGUE, *ANTITRUST COMMENTARIES*, July 2000 at 3 (on file with author) (citing *United States v. Airline Publ'g Co.*, 1994-2 Trade Cas. (CCH) ¶ 70,687 (D.D.C. 1994)). The joint venture allegedly generated detailed reports about future prices that allowed the parties to signal their pricing intentions to each other. Rule, *supra* note 346, at 72.

348. See Geewax, *supra* note 122 (noting concern of Thomas Underwood, an online travel industry analyst, that the venture "permits price signaling and allows instant competitive responses").

349. Bell & Adkinson, *supra* note 2, at 20 ("Through a combination of encryption, software design, and firewalls, a properly designed B2B exchange can protect the confidentiality of competitively sensitive information."). Ilene Knable Gotts, *Antitrust Review of Telecommunications Industry Mergers*, 14 ANTITRUST, Summer 2000, at 58, 64 n.37 ("Firewalls ... are a common way of restricting potentially anticompetitive information exchanges."). In its investigation of the proposed B2B purchasing joint venture among Ford, General Motors, and DaimlerChrysler, the FTC "focused on the electronic architecture of the site and insisted that it include 'firewalls' to prevent any leakage of sensitive price and product information...." Wilke, *supra* note 303. The FTC also required similar protections in connection with its approval of the General Motors-Toyota joint venture. See *General Motors Corp.*, 103 F.T.C. 374, 384-88 (1984).

### *B. Territorial Allocations*

The parties to a high technology joint venture may agree to various restraints that allocate markets and prevent competition among the parties outside the legitimate scope of the venture. Such restraints should be illegal under Section 1 because they eliminate competition without any compensating efficiency benefit. The airlines participating in Orbitz, for example, could use the joint venture to assign each airline exclusive rights to particular routes. Reservations could be programmed to ensure that no partner would offer Internet fares in competition with another partner on its designated routes. Such an agreement should be illegal as a naked restraint of trade among the airlines. The agreement would not be necessary to further the joint venture's legitimate goal of reducing marketing costs. Its only effect would be to eliminate competition in the sale of online airline tickets.

## VIII. ANALYZING THE MONOPOLY CONDUCT OF JOINT VENTURES

When the parties to a joint venture act collectively to pursue the purposes for which the venture was formed, the venture is acting as a single entity. In such cases, the venture should be assigned a single market share for the purposes of antitrust analysis. The venture can be considered a monopolist under Section 2 of the Sherman Act if its market share exceeds seventy percent.<sup>350</sup> Under the proposed approach, the courts would examine such a joint venture's conduct separately to confirm whether it violates Section 2. When a joint venture acts to perpetuate or extend its monopoly power, it should be treated no differently than any other monopolist. The courts have precluded individual monopolists from engaging in conduct whose sole purpose is to perpetuate their

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350. The existence of monopoly power "ordinarily may be inferred [when a defendant has] the predominant share of the market." *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966). A market share in excess of seventy percent typically has been deemed sufficient to support an inference of monopoly power. *See United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 391 (1955) (inferring monopoly power from seventy-five percent market share); *Heattransfer Corp. v. Volkswagenwerk, A.G.*, 553 F.2d 964, 981 (5th Cir. 1977) (noting that seventy-one to seventy-six percent market share supports inference); *Illinois ex rel. Hartigan v. Panhandle E. Pipe Line Co.*, 730 F. Supp. 826, 902 (C.D. Ill. 1990) (observing that for market shares greater than seventy percent, "courts have simply inferred the existence of monopoly power without specifically examining ... control over prices [or] competition").

monopoly power in a current market or extend that power into a new market.<sup>351</sup> Competitors should not be able to evade liability simply by forming a joint venture to carry out conduct that they would not have been allowed to pursue on their own.

#### A. Access Restrictions

A joint venture can often engage in monopoly leveraging when it operates a high technology network. If the network holds monopoly power, the joint venture can impose access restrictions that exclude its competitors from the related market served by the network. Such access restrictions can take several different forms. A joint venture may adopt a bald rule forbidding its competitors from membership in the venture, or it may impose more subtle restrictions on its competitors. The access terms may be so onerous that it is impossible for a competitor to use a joint venture's network effectively. A joint venture may, for example, charge competitors a price so much higher than its price to other parties that it "has the same effect on the rival as a pure refusal to deal."<sup>352</sup> A network joint venture can deny access to competitors simply by designing its interfaces to be incompatible with the related products of competitors.<sup>353</sup> A purchasing B2B may be theoretically open to all qualified parties, but it may close bidding on certain transactions after receiving a limited number of bids. "These systems thus favor those sellers with better integration into the exchange's systems, typically those with the greatest ownership stake in the exchange itself."<sup>354</sup>

Network joint ventures have a natural incentive to allow all qualified participants to use their facilities, because the value of the network increases in direct proportion to the number of users. Indeed, the vision of most B2Bs is to "provide a platform on which

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351. See Thomas A. Piraino, Jr., *Identifying Monopolists' Illegal Conduct Under the Sherman Act*, 75 N.Y.U. L. REV. 809, 826-44 (2000) (describing the federal courts' approach in Section 2 monopolization cases).

352. Ordover & Willig, *supra* note 158, at 33.

353. "Interfaces are the specifications or formats that allow the various components in a system to work together." Farrell & Katz, *supra* note 37, at 648.

354. FTC STAFF REPORT, *supra* note 17, Part 3, at 17. A B2B may also present information on a computer screen in a way that favors the B2B's current members, or it may promulgate discriminatory operating rules that "leave rivals with reduced functionality or higher costs." *Id.*, Executive Summary, at 3.

all industry players will conduct procurement and sales operations.<sup>355</sup> If a venture acts against its self-interest and denies access to qualified parties, there should be a strong presumption that the venture is attempting to perpetuate or extend its monopoly power.<sup>356</sup>

Guaranties of open access will be particularly important when B2Bs, telecommunications systems, or other electronic networks control a critical gateway to the relevant market.<sup>357</sup> In most cases, an outsider will not be able to duplicate the advantages of such a monopoly network. Consider a joint venture that controls a portion of the Baby Bells' local telephone systems. The four remaining Baby Bells—Verizon, BellSouth, SBC Communications, and Qwest—still hold monopoly power in ninety percent of local telephone markets.<sup>358</sup> Long-distance carriers must access the Baby Bells' local networks in order to reach consumers.<sup>359</sup> Since the Baby Bells' local

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355. Bell & Adkinson, *supra* note 2, at 18; see also *Roundtable on B-to-B Exchanges*, *supra* note 62, at 13 (comments of Professor Sunil Gupta) (suggesting that “open exchanges have a better chance of succeeding”).

356. See Correia, *supra* note 254, at 770 (“[The joint venture] may benefit from expanding the membership due to economies of scale on both the supply side and the demand side. In that case, the exclusion is more likely to be aimed at keeping a maverick out of the market.”) (footnote omitted).

357. Some commentators have argued that open access rules have adverse effects on competition among joint ventures. See *id.* at 763 (asserting that open access rules “undermine the incentive to collaborate in the first place,” encourage firms not to join a risky research effort until it is successful, and prevent rival groups from forming competing ventures); Werden, *supra* note 109, at 729 (“[I]f competing joint ventures would be better than just one, mandating access probably makes matters worse ....”); Glassman, *supra* note 12, at A26 (criticizing FTC’s requirement for open access to AOL Time Warner’s cable system as “notice to high-tech firms that ... their property rights ... may be stripped from them at will for political reasons. The certain result of such policies will be to deter investment in innovation.”); Balto, *supra* note 301, at 10 (“If a venture is overinclusive it may reduce the likelihood competing exchanges will be formed.”). However, the beneficial effects of open access rules far outweigh their adverse effect. Open access will only be compelled in those circumstances in which a joint venture has obtained control over a critical gateway to the relevant market and in which failure to compel access would result in a firm’s complete exclusion from the market.

358. Yochi J. Dreazen, *Battle over Bells and Broadband Service Heats Up*, WALL ST. J., May 15, 2001, at A28; see also Armstrong, *supra* note 69 (describing Baby Bells’ monopoly over local telephone service).

359. The Telecommunications Act of 1996 recognized that access to the local Bell networks is essential for long-distance companies. The Act prohibits the Baby Bells from offering long-distance service originating within their regions until they prove that they have provided their competitors with access to their local telephone networks. See 47 U.S.C. § 271 (c) (Supp. 1999).

telecommunications networks are too expensive to duplicate,<sup>360</sup> joint ventures which control any portion of a Bell system should be required to give open access to any long-distance carriers that desire to use the system.<sup>361</sup>

Even in certain non-monopoly cases, a plaintiff may be able to demonstrate that, but for access to a joint venture's network, it could not compete effectively in a related market. Most of the producers of a particular product, for example, may form a group of ventures that together control the gateway to the relevant market. If a firm cannot access at least one of those ventures, it will be unable to compete in that market. Consider "MusicNet" and "Pressplay," two joint ventures recently formed by five major record companies to distribute music over the Internet. The members of these ventures control eighty-five percent of the songs licensed for distribution in the United States.<sup>362</sup> When the major U.S. record companies sued Napster for copyright infringement, Napster counterclaimed, alleging that the two joint ventures committed various antitrust violations, including a refusal to license musical compositions to Napster for its new "for-pay" Internet music service. If proven, such a refusal to deal should be deemed an illegal denial of access to the online music market.<sup>363</sup>

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360. See Schiesel, *supra* note 73 ("The local phone companies have networks that cannot be duplicated.")

361. See *MCI Communications Corp. v. AT&T Co.*, 708 F.2d 1081, 1131-33 (7th Cir. 1983) (requiring AT&T—which at the time of suit still owned local Bell telephone systems—to allow MCI, its competitor in long-distance market, to interconnect its long distance lines with AT&T's local lines). One commentator recently pointed out that

forcing monopolies to let others tap their systems is an effective way to foster competition. Today's consumer Internet exists because of that kind of competition. The Bells were required to give companies like America Online and Earth-Link access to their phone lines for dial-up services. Does anyone really believe so many consumers would be online today if Internet service had been left to the Bells and the cable companies?

Thomas E. Weber, *Static on the Line: One Man's Fight to Get a Speedy Internet Link*, WALL ST. J., June 18, 2001, at B1.

362. Matt Richtel, *Napster Wins One Round in Music Case*, N.Y. TIMES, Feb. 23, 2002, at C1.

363. As the judge in the case recently opined, "[T]hese joint ventures look bad, sound bad and smell bad." *In re Napster, Inc. Copyright Litig.*, 191 F. Supp. 2d 1087, 1109 (N.D. Cal. 2002). The Justice Department stated in October 2001 that it was commencing "an antitrust investigation into whether the [record] companies have misused their copyrights to dominate the digital market." Richtel, *supra* note 362.



Certain B2B joint ventures may control resources to which all firms in the relevant market should be allowed access. B2B purchasing ventures, such as those being established by the Big Three automobile companies,<sup>364</sup> may include so many of the firms in the relevant market that it would be impossible for a nonmember to form a comparable B2B.<sup>365</sup> Competitors denied access to such purchasing B2Bs would be unable to obtain the same discounts on raw materials, putting them at a competitive disadvantage. Access to certain B2B marketing joint ventures may be just as critical to a firm's success. For example, Southwest Airlines is not a member of the major airlines' Orbitz joint venture. Southwest has charged that "[t]he airline owners of Orbitz have a long record of conspiring to eliminate competition, especially from low-fare airlines."<sup>366</sup> The owners of Orbitz should not be permitted to preclude Southwest from participating in the online reservation system on terms comparable to the original partners. Since Orbitz includes most of the world's airlines, carriers such as Southwest would be at a competitive disadvantage if they were not allowed to have their fares displayed as prominently in the venture's reservation system as the fares of the original partners.

The courts should be able to easily devise remedies for firms' inability to access essential joint ventures. Firms need not necessarily be admitted as equity partners to the venture. They simply must be allowed to use the facilities of the venture as required to compete in the relevant market. Low-cost airlines, for example, could be allowed to market their Internet fares on Orbitz without being admitted as full partners. The airlines could be charged a reasonable fee designed not only to amortize the costs of

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364. Ford, General Motors, and DaimlerChrysler have announced a joint arrangement to purchase materials over the Internet. Robert L. Simpson et al., *Big Three Car Makers Plan Net Exchange*, WALL ST. J., Feb. 28, 2000, at A3. The joint venture is expected to have "a market capitalization of \$30 billion to \$40 billion within a couple of years, rivaling the auto makers' own valuations." *Id.*; see also John R. Wilke & Gregory L. White, *FTC Opens Antitrust Inquiry into Plan by Big 3 Car Makers for Online Venture*, WALL ST. J., Mar. 22, 2000, at A6. The venture "is expected to wield staggering purchasing power of as much as \$240 billion a year." Wilke, *supra* note 303.

365. One commentator has concluded that the relevant question should be whether "the excluded firm [can] secure the same benefits from its own B2B venture or through an alternative B2B arrangement." Balto, *supra* note 301, at 28.

366. John R. Wilke, *Twenty States Oppose Airlines' Proposal for Joint Venture in Online Reservations*, WALL ST. J., Jan. 11, 2001, at A10 (quoting a complaint by Southwest to the Transportation Department).

their participation but also to reimburse the original partners for their up-front risk in establishing the joint venture. Furthermore, any open access requirements should expire if, at any time in the future, a viable new provider of the same services enters the relevant market.<sup>367</sup>

### *B. Exclusive Dealing*

High technology joint ventures often prohibit their members from joining or dealing with competing ventures. Such exclusivity requirements can be in the form of “carrots” (incentives to deal with the incumbent joint venture) or “sticks” (penalties for dealing with competing ventures). B2Bs, for example, may give participants increased equity interests or discounts on services in return for their commitment to run all sales or purchase transactions exclusively through the venture.<sup>368</sup> B2Bs may also impose fees on participants who deal with competing ventures or simply deny membership to participants who do so.<sup>369</sup> When they are first formed, B2Bs legitimately may require exclusivity commitments from their participants. Newly formed B2Bs “must show their participants (and financial backers) that they will indeed attract and keep enough volume to survive.”<sup>370</sup> It would be reasonable for a B2B to prohibit its founding members from joining or participating in competing B2Bs. Such restrictions represent a commitment by the founding members to ensure the B2B’s success.<sup>371</sup>

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367. See Abbot B. Lipsky, Jr. & J. Gregory Sidak, *Essential Facilities*, 51 STAN. L. REV. 1187, 1216 (1999) (“[T]he owner of a facility is free to expel a user ... once a rival provider of the same kind of facility enters the geographic market.”).

368. See FTC STAFF REPORT, *supra* note 17, Part 3, at 23 (describing such exclusivity “carrots”); Gail F. Levine & Hillary Greene, *Antitrust Guideposts for B2B Electronic Marketplaces*, 15 ANTITRUST, Fall 2000, at 26, 28 (same).

369. See FTC STAFF REPORT, *supra* note 17, Part 1, at 22 (describing such exclusivity prohibitions); Balto, *supra* note 51, at 844 (describing exclusivity penalty fees).

370. Levine & Greene, *supra* note 368, at 28; see also Bell & Adkinson, *supra* note 2, at 22 (“This assurance that others will actually participate is necessary to induce the parties to incur the costs of building the exchange.”); Rule et al., *supra* note 346 (“There may be good reasons for obtaining minimum commitments from [B2B] participants (e.g., to cover the costs of setting up and operating the site.)”).

371. See Bell & Adkinson, *supra* note 2, at 22 (pointing out the reasonableness of exclusivity restrictions for founding members).

After a B2B comes to dominate the relevant market, however, a court may assume that any continuing exclusivity requirements have no purpose other than to perpetuate the B2B's market power.<sup>372</sup> B2Bs, like other networks, become more attractive to users as additional participants are added.<sup>373</sup> Once a B2B obtains critical mass and attracts an increasing number of buyers and sellers, its network advantages may cause the market to tip in its favor. Such B2Bs are likely to achieve a durable form of monopoly power.<sup>374</sup> Dominant B2Bs thus do not need exclusivity requirements to assure their effectiveness.<sup>375</sup> Furthermore, after a B2B becomes dominant, exclusivity clauses have a more adverse competitive effect in the relevant market. Exclusivity requirements imposed by dominant B2Bs leave little, if any, room for competing B2Bs to gain control over a sufficient volume of transactions to be viable.<sup>376</sup> It is hard enough for a firm to enter the relevant market and compete with a dominant B2B. Exclusivity rules, however, make entry nearly impossible, because most, if not all, prospective users of a new B2B will be explicitly precluded from participation. Thus, a dominant B2B can use exclusivity rules to create "an almost impervious barrier to competitive entry...."<sup>377</sup>

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372. See Balto, *supra* note 301 ("[A] collateral restraint that is lawful when the venture is a fledgling might ripen into illegality as the venture matures into a position of strength.").

373. See Bell & Adkinson, *supra* note 2, at 19 ("B2B exchanges can be seen as exhibiting network effects—the effects that arise when the value of the network to all increases with the addition of each participant.").

374. See *supra* notes 101-08 and accompanying text.

375. As the *FTC Staff Report* pointed out, "Given that a B2B with strong network efficiencies would hold inherent attractions for buyers and sellers ... [it may be questioned] whether exclusivity requirements are reasonably necessary." *FTC STAFF REPORT*, *supra* note 17, Part 3, at 33. A B2B may also argue that exclusivity requirements are necessary to ensure that participants do not share the B2B's proprietary competitive information with its rivals. A B2B can, however, protect its proprietary information through less restrictive means, such as confidentiality agreements.

376. Levine & Greene, *supra* note 368, at 29. The *FTC Staff Report* emphasizes that "[t]ying the participants to a single B2B may undermine the ability of alternatives to compete, effectively increasing the B2B's market power." *FTC STAFF REPORT*, *supra* note 17, Part 3, at 29; see also Rule et al., *supra* note 346, at 72 ("The concern would be that exclusivity could entrench the dominant player—here the dominant B2B."). In *United States v. Visa U.S.A., Inc.*, 163 F. Supp. 2d 322 (S.D.N.Y. 2001), the court demonstrated a similar concern that dominant credit card systems could perpetuate their market power through exclusivity requirements. *Id.* at 379. The court struck down bylaws of the Visa and MasterCard credit card systems that prohibited member banks from issuing competing credit cards. *Id.* at 408.

377. Balto, *supra* note 51, at 804. Similar concerns have been expressed about exclusivity

Other high technology joint ventures that have achieved dominance in their markets also should not be permitted to impose exclusive dealing arrangements. For example, five motion picture studios (Sony, Warner Bros., Universal, Paramount, and MGM) have formed "MovieFly," a joint venture to market films on demand over the Internet and cable television.<sup>378</sup> Given its partners' market power, MovieFly clearly will hold a dominant position in marketing films online. The courts should preclude MovieFly from requiring IAPs, ICPs, and cable systems to purchase films exclusively from it. Such arrangements would foreclose other studios from these critical consumer distribution channels. MovieFly has no rational motive for imposing exclusivity rules upon its customers, other than to perpetuate its dominance in the online movie market. Under the proposed approach, the courts could ensure that MovieFly does not use such rules to prevent other movie studios from competing in the market for on-demand films.<sup>379</sup>

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requirements for other network joint ventures. Prior to 1992, for example, "MAC," one of the dominant national ATM networks, did not permit its bank members to participate in rival systems. If a bank wanted to participate in a competing network, it would have had to withdraw all of its ATMs from MAC. Individual banks were unlikely to do so unless a "critical mass" of other banks decided at the same time to migrate to the other system. "Faced with that 'all or nothing' decision, few banks chose to align with competing networks." *Id.* Some commentators and antitrust enforcers have argued, however, that when there are competing joint ventures in the relevant market, exclusivity requirements may actually enhance competition. In the absence of exclusivity clauses, for example, banks have been able to participate in both the Visa and MasterCard credit card systems. The resulting cross-ownership may reduce the incentive for these two systems to compete. *See* Kenneth E. Scott, *Electronic Commerce Revisited*, 51 STAN. L. REV. 1333, 1338 (1999) ("Banks compete vigorously to issue cards or sign up merchants, but competition between Visa and MasterCard is muted."). *But see* *Visa U.S.A.*, 163 F. Supp. 2d at 378-79 (declining to find dual membership of banks on Boards of Visa and MasterCard systems to be illegal).

378. Matthews, *supra* note 332.

379. *See id.* (stating that test of legality of Moviefly will be whether venture keeps "rivals out of the market through any exclusive agreement"). To date, however, Moviefly has stated that it will not "demand exclusive runs of each film." *Id.* In *United States v. Columbia Pictures Industries, Inc.*, the court indicated that such an exclusivity requirement should be illegal. 507 F. Supp. 412 (S.D.N.Y. 1980). In that case, four of the six major film producers had formed a joint venture to operate a pay television movie channel. The court held that the partners violated the Sherman Act by agreeing to make their motion pictures available only to their movie channel on an exclusive basis for an initial period of nine months. *Id.* at 434.

### C. Standards-Setting

Although standards-setting joint ventures should be legal on their face,<sup>380</sup> they can engage in conduct that restricts competition in the market for services provided by the ventures' members. On one hand, standards-setting can help such markets run more smoothly. Certifications standards help guarantee that doctors, lawyers, accountants, engineers, and other professionals are competent to practice their trade. In certain cases, standards-setting joint ventures may promote competition. A uniform standard for computer operating systems, for example, could ensure that many different applications programs would run effectively on competing systems. Standards-setting joint ventures, however, also can attempt to restrict entry to the market for products or services provided by the members of the venture. By adopting strict licensing standards, the members of a professional association "can effectively control competition and preserve their collective market dominance."<sup>381</sup> For example, the members of a trade association may certify the safety of products in a way that unfairly excludes competing products from the market.<sup>382</sup>

Under the proposed approach, a standards-setting joint venture would violate Section 2 when it acts arbitrarily to exclude particular competitors from the relevant market.<sup>383</sup> Such a joint venture should not be permitted to adopt arbitrary rules that establish its own members' products as the industry standard. Indeed, given the short duration of high technology product life cycles, a joint venture could exclude a rival from a market merely by delaying the

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380. See *supra* notes 310-13 and accompanying text.

381. Marina Lao, Comment, *The Rule of Reason and Horizontal Restraints Involving Professionals*, 68 ANTITRUST L.J. 499, 522 (2000).

382. See *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 364 U.S. 656, 658, 660 (1961) (finding that trade association may have refused to grant "seal of approval" to a gas burner in order to exclude the product from the relevant market).

383. Although a standards-setting joint venture could be regarded as an essential facility, the courts should not compel such ventures to admit all competitors in the market to membership. A standards-setting venture may only be able to operate efficiently if it restricts its membership to a small group. See *Balto & Pitofsky*, *supra* note 43 ("[T]he ability to restrict membership to a standard-making body may be efficient and procompetitive, based on the proposition that a relatively small group may function more effectively than a more inclusive one...."). The courts must be careful not to impose requirements that cause even a slight delay in establishing an industry-wide standard for high technology markets, where the pace of technological change is so swift.

certification of its product.<sup>384</sup> Thus a standards-setting joint venture must follow due process rules which are transparent, objective, and fair and do not discriminate in favor of the participants' products.<sup>385</sup>

#### *D. Monopsony Conduct*

"Monopsony" conduct constitutes the exercise of market power by buyers to "drive down the purchase price of an input by buying less of it and, therefore, depress output."<sup>386</sup> Although lowering costs is generally considered beneficial to consumers, a collective effort to drive prices below a competitive level could lead suppliers to sell less of the relevant product, making fewer goods available to consumers.<sup>387</sup> Many suppliers fear that the auctions that will be conducted by the new B2B purchasing joint ventures will unduly reduce, or entirely eliminate, their profit margins.<sup>388</sup> In order to possess monopsony power, a purchasing collaboration would have to include all, or almost all, the buyers in the relevant market.<sup>389</sup>

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384. See Gellhorn & Miller, *supra* note 250, at 864 ("Where ... the duration of product life cycles [is] brief, delay in the approval of a standard critical for entry into a market can be as effective as direct exclusion.").

385. See *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 510-11 (1988) (finding that a fire protection association improperly set standards for electrical wiring systems through procedure lacking in due process). If a joint venture petitions a government entity to become involved in standards-setting, the joint venture's conduct may be exempt from antitrust liability. See *United Mine Workers of Am. v. Pennington*, 381 U.S. 657, 670 (1965) (holding that "Noerr shields from the Sherman Act a concerted effort to influence public officials regardless of intent or purpose"); *E.R.R. Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127, 136 (1961) (holding that firms may "attempt to persuade the legislature or the executive to take particular action with respect to a law that would produce a restraint or a monopoly").

386. FTC STAFF REPORT, *supra* note 17, Executive Summary, at 3.

387. See Balto, *supra* note 301, at 22 (noting that "the reduction in the input price will most often result in higher prices to consumers because it will lead to less of that input being sold").

388. See Jeffrey Bull et al., *Suppliers Ponder Impact of Centralized System*, WALL ST. J., Feb. 28, 2000, at A16 (stating that a recent auction "saw price reductions of 10% for tires and 40% for rubber hoses—terrifying numbers in an industry where profit margins rarely make it out of the single digits"); Totty, *supra* note 2 ("[S]uppliers are wary that B-to-B's promised savings will come out of their balance sheets."). As an automobile analyst recently explained, "These online auctions are really going to squeeze the margins of some suppliers who can't afford to be squeezed." Bull et al., *supra* (quoting Rod Lache, automobile analyst for Deutsche Banc Alex Brown).

389. A B2B would not likely possess monopsony power in markets for indirect goods (such as maintenance, repair, or overhaul items) purchased by many other buyers. The greatest threat of monopsony power occurs when a large portion of the purchasers of direct inputs

Any agreement among buyers in a purchasing collaboration with monopsony power to take concerted action to reduce their suppliers' prices should be illegal under Section 2. Such conduct improperly extends the market power of the buyers to the upstream supply market. Purchasing B2Bs may, in fact, be in a unique position to exercise monopsony power.<sup>390</sup> Through its information-sharing practices, a B2B can effectively coordinate its members' decisions on the prices to be paid for certain products.<sup>391</sup>

### CONCLUSION

During the next several years, the federal courts and enforcement agencies increasingly will be called upon to analyze monopoly conduct and competitor collaborations by high technology firms. The means chosen to judge such conduct will have a substantial bearing on the direction of the American economy in the twenty-first century. The courts' current approach to high technology competition is confused and inconsistent, and it deters American firms from making investments that could enhance the nation's productivity. This Article proposes a new approach that builds upon the courts' strengths in analyzing the purpose of defendants' conduct and avoids their weakness in economic analysis. The proposed approach is consistent with a long line of federal precedent extending to the earliest days of the Sherman Act. By adopting the approach proposed in this Article, the courts can finally ensure that antitrust enforcement facilitates rather than hinders growth in high technology markets.

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(such as specialized raw materials or machinery) collaborate in a purchasing B2B. Levine & Greene, *supra* note 368, at 29-30.

390. In its investigations of the B2B purchasing joint venture among the Big Three automobile companies, the FTC was "especially concerned about monopsony or oligopsony, in which one or many major purchasers band together to squeeze suppliers and force down their prices." Wilke, *supra* note 303.

391. See FTC STAFF REPORT, *supra* note 17, Part 3, at 14-15 (voicing concern over such coordination).