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# Raising the Standard: Antitrust Scrutiny of Standard-Setting Consortia in High Technology Industries

Douglas D. Leeds\*

*People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in conspiracy against the publick, or in some contrivance to raise prices.*

—Adam Smith  
THE WEALTH OF NATIONS<sup>1</sup>

## INTRODUCTION

In September of 1995, nine of the largest consumer electronics manufacturers in the world, including such powerhouses as Sony, Phillips, Toshiba, and JVC, jointly announced that they had reached agreement on a standard format for the next generation of audio/video compact discs (“CDs”), to be known as digital video discs (“DVDs”).<sup>2</sup> The agreement was widely hailed both by its participants and by the potential consumers of the new discs, the producers of entertainment and computer “software,” for it meant that the consortium had averted a format fight similar to the one be-

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\* Associate, Thelen, Marrin, Johnson & Bridges, L.L.P., San Francisco, CA. University of California, Berkeley, B.A. 1992; Georgetown University Law Center, J.D., 1996. The author would like to thank Judith Whalley, Jonathan B. Baker, Steven Salop, John Shenefield, Joseph Kattan, Robert Pringle, Wynne Carvill, and Tracy Leeds for their help and inspiration in preparing this Essay. Any errors are the author’s alone.

1. ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 145 (R.H. Campbell & A.S. Skinner eds., Oxford Univ. Press 1976).

2. Peter M. Nichols, *Home Video*, N.Y. TIMES, Sept. 29, 1995, at D17.

tween the VHS and Betamax standards<sup>3</sup> over a decade ago.<sup>4</sup>

Antitrust officials at the Department of Justice (“Justice Department”) were initially less enthusiastic about the agreement. They were already investigating two of the parties to the agreement, Sony and Phillips, over practices the two firms used to jointly license the current CD technology.<sup>5</sup> However, when the consortium agreed to relax the restrictions placed on the licensees of the new technology and to lower licensing fees, the new format won the blessing of the Justice Department.<sup>6</sup>

The Justice Department’s response to the DVD consortium was consistent with the 1995 Department of Justice/Federal Trade Commission (“FTC”) Antitrust Guidelines for the Licensing of Intellectual Property applicable to standard-setting consortia.<sup>7</sup> The response was also no more strict than that which European antitrust enforcers would have taken.<sup>8</sup> As discussed below,<sup>9</sup> the concerns of the U.S. and European antitrust enforcement agencies are generally satisfied when outside firms are permitted open access to the standards established by these horizontal agreements to set “interface” or “interoperability” standards.<sup>10</sup> However, this

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3. See John M. Ketteringham, *In Introducing Business Concepts, Aggressiveness Doesn’t Always Work: Development of 2 VCR Systems Is a Classic Case*, L.A. TIMES, Feb. 15, 1987, § 4, at 3.

4. See, e.g., Mike Langberg, *Dawning of DVDs Age: New Technology Expected to Debut Within Six Months May Render CD-ROMs Obsolete*, SAN JOSE MERCURY NEWS, Jan. 14, 1996, at 1F; Jim Kirk, *New Disks Expected to Replace VCRs: 9 Firms Unveil Standard Format*, CHI. SUN TIMES, Dec. 10, 1995, at 60.

5. Dennis Kneale, *Sony-Philips Pact on CD-Licensing Fees Is Target of U.S. Antitrust Investigation*, WALL ST. J., July 12, 1994, at A3.

6. *Philips, Sony Ease DVDs Restrictions*, ELECTRONIC BUYERS’ NEWS, Jan. 2, 1996, at 44.

7. See *infra* part II.A; see also *infra* note 78.

8. See *infra* part II.B.

9. See *infra* part II.

10. Interface or interoperability standards specify how one product or type of product will fit or communicate with other products or types of products. See *infra* text accompanying note 15 (further defining interface standards). This Essay does not discuss other types of standards that may be set by agreements between horizontal competitors, such as safety standards. A safety standard sets

permissive approach is likely to miss some of the potentially serious anticompetitive harms caused by such agreements.<sup>11</sup> Furthermore, without tougher scrutiny, consortia can potentially manipulate these standards to serve anti-competitive ends.<sup>12</sup>

Part I of this Essay describes the pro-competitive benefits, as well as the potential anticompetitive harms, of horizontal standard-setting consortia in high technology industries under an open licensing regime. Part II discusses the scrutiny applied to these consortia by the U.S. and European antitrust enforcement agencies. Part III analyzes the practical problems of crafting a more encompassing antitrust review. Finally, Part IV of this Essay offers a model for providing greater scrutiny of standard-setting consortia by replacing virtual per se validity of open access standard-setting consortia with a “quick look” rule of reason approach coupled with an examination of the standard-setting process.

## I. STANDARD-SETTING IN HIGH TECHNOLOGY INDUSTRIES

### A. *Pro-Competitive Benefits of Standardization*

As noted above, agreements between horizontal competitors that set interoperability standards are generally inoculated from the careful scrutiny given to most other types of express agreements between horizontal competitors, such as agreements relating to terms of sale or products to be sold.<sup>13</sup> This is because interoperability standardization has recognized and significant pro-competitive benefits. Before explaining these benefits, though, it is important to define the

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the characteristics a product must have to be sold in a market or earn certification from a certifying entity. Safety standards differ in important ways from interface standards and raise many unique antitrust problems. *See generally* Harry S. Garcia, *Federal Antitrust Law and Trade and Professional Association Standards and Certification*, 19 U. DAYTON L. REV. 471 (1994).

11. *See infra* notes 81-85, 89-91 and accompanying text.

12. *See infra* part I.B.

13. *See supra* notes 11-12 and accompanying text.

term “interoperability.”

Quite simply, interoperability is the capacity of the products of one vendor to communicate, or interface, directly with the products of competing suppliers or with complementary products.<sup>14</sup> An example of interoperable competing products is the floppy disk, which personal computer users can trade amongst themselves, even if their disks or disk drives are produced by different manufacturers.<sup>15</sup> This interoperability is possible because the disks and drives are made to standard specifications. An example of interoperability of complementary products is the thirty-five millimeter film that fits into a standard camera. Camera manufacturers and film suppliers conform their products to a particular standard that allows the camera and film to work together.

Two pro-competitive benefits of interoperability standardization are easily identifiable. The first is that standardization permits easier consumer comparison between competing products because the burden of acquiring information on the merits of two competing standards is avoided. Thus, standardization reduces the cost of acquiring information. Similarly, standardization also eliminates a significant factor of product differentiation between competing products, thus facilitating price competition between rival producers—an obvious benefit to consumers.<sup>16</sup>

The second benefit of standardization is that it avoids inefficient duplication of investments in comparable, yet incompatible, innovation.<sup>17</sup>

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14. Joseph Kattan, *Standard-Setting in High Technology Industries 1* (1995) (unpublished outline, on file with author).

15. *Id.*

16. Jack E. Brown, *Technology Joint Ventures to Set Standards or Define Interfaces*, 61 ANTITRUST L.J. 921, 922-23 (1993).

17. It is by no means obvious, however, that multiple investments in innovation will be inefficient. In fact, it is the potential for standardization to lead to the elimination of efficient investments in innovation that suggests that standardization can be used as a means to promote anticompetitive ends. See *infra*

A third, less obvious and more complex, benefit of standardization results from network effects, or network externalities.<sup>18</sup> To understand these benefits and the potential for anticompetitive harm deriving from them, it is first necessary to understand the theory of network externalities.

Most simply put, “network externality” refers to the concept that the value to a consumer of a particular good depends on the number of users of that good or a complementary good.<sup>19</sup> For example, the value of a telephone to a consumer depends on the number of people that can be called, or in other words, the number of previous consumers of telephones.<sup>20</sup> Similarly, the value of a compact disc player depends on the number of compatible discs available.<sup>21</sup> This phenomenon is also known as “positive feedback;”<sup>22</sup> that is, the decision of early consumers has a positive feedback on the decision of later consumers.<sup>23</sup>

Though the concept of positive feedback does not initially seem particularly complex or difficult to understand, it is, in fact, contrary to the basic assumptions of conventional economic theory. At the heart of conventional economic theory is the assumption of “diminishing returns.”<sup>24</sup> The goods a consumer wishes to purchase are based on the goods’ price. As more consumers desire the same goods, the price of those goods will be bid up. Eventually, some con-

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part I.B.

18. Stan J. Liebowitz & Stephen E. Margolis, *Should Technology Choice Be a Concern of Antitrust Policy?*, 9 HARV. J.L. & TECH. 283, 286 (1996).

19. Stan J. Liebowitz & Stephen E. Margolis, *Are Network Externalities a New Source of Market Failure?*, 17 RES. L. & ECON. 1, 3 (1995).

20. This would be an example of a “direct” network externality. See Michael L. Katz & Carl Shapiro, *Network Externalities and Compatibility*, 75 AM. ECON. REV. 424, 424-40 (1985).

21. This would be an example of an “indirect” network externality. See Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND J. ECON. 70, 70 (1985).

22. See, e.g., W. Brian Arthur, *Positive Feedbacks in the Economy*, 262 SCI. AM. 92, 92 (1990).

23. *Id.*

24. SMITH, *supra* note 1, 56-58.

sumers will not wish to pay the new, higher price and will drop out of the bidding. This, in turn, lowers prices and attracts new consumers. Eventually, the process reaches an equilibrium where the demand for the goods equals their supply. The equilibrium marks the optimal outcome—the most efficient use and allocation of resources.<sup>25</sup> This is the reasoning behind Adam Smith’s “invisible hand”—the simple “law of supply and demand” taught in any introductory economics course.<sup>26</sup>

Note, however, how the above model depends on the presence of negative feedback: the more the early consumers desire the goods, the less the later consumers will desire the goods because the price will have been bid up. When positive feedback exists, however, the early consumers’ desires positively influence the desires of later consumers. For example, although both VHS and Betamax videotape formats were introduced to the market at about the same time, the decision of early consumers to purchase VHS machines over Betamax machines led later consumers to also favor VHS over Betamax. Eventually, the early consumers’ decision led to the near universal adoption of VHS and the virtual extinction of Betamax.<sup>27</sup>

Another assumption inherent in conventional economic theory is that resources are limited. If resources were unlimited, every consumer could have their desired good at a low price. But, as resources are exhausted, the remaining resources are bid up, and eventually out of the reach (or the desire) of some consumers. Thus, limited resources will constrain even some markets that exhibit network externalities. Consider, for example, the “consumption” of invitations to a party: a potential party-goer’s desire for an invitation to a party will likely increase as the number of invited guests rises. However, because the party can only accom-

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25. *Id.*

26. *Id.* at 423.

27. Arthur, *supra* note 22, at 92.

modate a certain number of people (limited, for example, by the host's financial resources, the size of the venue, or the willingness to incur the neighbors' wrath), the price of an invitation (measured, perhaps, in units of effort expended in "schmoozing" the host) eventually will outweigh the value of the invitation to the consumer.

High-technology goods, on the other hand, may not face the same sort of constraints because the key component of such goods is knowledge.<sup>28</sup> Knowledge is special in that the cost of knowledge generally does not increase with the supply of the goods it produces.<sup>29</sup> For example, the cost of selling additional disks containing a software program will not increase appreciably because the predominate cost of developing the program—the cost of the knowledge to build the program—has already been fully incurred and will not increase with the number of units sold. By contrast, the host contemplating sending out additional invitations will incur increased costs due to the need to buy additional inputs (which were identified as a bigger venue or additional neighborly wrath). This constraint leads the host to stop issuing invitations when the cost of enlarging the party to include the next guest would exceed the benefit from having that guest. Thus, high-technology goods often exhibit decreasing average cost.

When a good exhibits both decreasing average cost and network externalities, a consumer of that good experiences positive feedback and the presence of "increasing returns" replaces the rule of diminishing returns.<sup>30</sup> Markets with increasing returns imply that bigger is better:<sup>31</sup> consumers derive more value as the number of users grows. As a result,

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28. *Id.* at 93.

29. *Id.*

30. *Id.*

31. Stan J. Liebowitz & Stephen E. Margolis, *Chicken Little Comes Home to Roost: A Misplaced and Flawed Economic Theory Bedevils Microsoft* (visited Mar. 25, 1997) <<http://www.pub.utdallas.edu/~liebowit/upside.html>>.

the amount each is willing to spend also grows; because costs do not rise, profits increase.

Interoperability standards provide pro-competitive benefits by creating “networks” of compatible products. A consumer of any product conforming to the standard will increase the welfare of all current and potential consumers of a compatible product, even if different firms manufacture the products. Thus, both suppliers and consumers of network goods would prefer the industry to subscribe to a single standard.<sup>32</sup> This would maximize the network externalities.

Finally, a fourth procompetitive benefit of interoperability standards is that standardization may improve competition by promoting innovation. Without a single accepted and open standard, firms that wish to improve on current technology would be forced to gain acceptance for an entire standard, rather than for a compatible product. Thus, consumers considering whether to adopt the product containing the new innovation would be forced to balance technological improvement with the loss of network externalities. If the network externalities are strong, the consumer may choose to forego adopting the new standard despite the new innovation. Recognizing this, firms would be less likely to invest in innovation.

However, if a single accepted and open standard exists, consumers can adopt compatible technological improvements without surrendering network externalities. In essence, consumers are free to “mix and match” products conforming to that standard,<sup>33</sup> a phenomenon that would likely

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32. Note that this preference is only over a technologically equivalent alternative standard that is not universally adopted. See Joseph Farrell, *Standardization and Intellectual Property*, 30 JURIMETRICS J. 35, 36 (1989). When a technologically superior alternative exists, the consumer must balance the technological benefits of adopting the new standard with the costs associated with participating in a smaller network. *Id.* This balancing can be manipulated toward anti-competitive ends. See *infra* notes 42-77 and accompanying text.

33. See Carmen Matutes & Pierre Regibeau, “Mix and Match:” *Product Compatibility Without Network Externalities*, 19 RAND J. ECON. 221, 222, 226 (1988).

stimulate firms' investment in this "intra-standard" innovation.

B. *Anticompetitive Harms of Standardization*

Despite the substantial benefits of standardization, the story of open interoperability standards is not all positive. While an increase in intra-standard innovation is possible, there is also the very real possibility that, because of the open standard, important investments in non-compatible innovation will dissipate.<sup>34</sup> Commenting on research joint ventures, which are similar to standard-setting consortia in that a combination of firms agree to pursue a unified research objective,<sup>35</sup> the Antitrust Division of the Justice Department noted in 1980:

Industry-wide research projects that include many or all firms in a line of commerce . . . pose antitrust concerns. These are more likely to restrain competition in innovation than more limited projects involving a few firms with lesser market shares. There is danger . . . that a single project will produce less innovation than will a variety of single and joint efforts employing alternative approaches.<sup>36</sup>

The reduction in extra-standard innovation can lead directly to anticompetitive injury. First, consumers are deprived of non-compatible technological innovations that would have been developed absent the standard.<sup>37</sup> Second, the reduction of product differentiation eliminates one aspect of competition in the market for standardized prod-

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34. William E. Cohen, *Competition and Foreclosure in the Context of Installed Base and Compatibility Effects*, 64 ANTITRUST L.J. 535, 550 (1996).

35. In fact, the danger posed by open standards may actually be greater than that posed by joint research projects because in the case of open standards, the market share of those firms participating in the standard can reach 100%, thus completely eliminating extra-standard competition.

36. U.S. DEP'T OF JUSTICE, ANTITRUST GUIDE CONCERNING RESEARCH JOINT VENTURES 11-12 (1980).

37. See Farrell, *supra* note 32, at 37.

ucts.<sup>38</sup> Reduced product differentiation facilitates coordinated behavior in an industry by reducing the cost variables—that is, the variance among similar goods produced by similar manufacturers. Reducing the cost variables increases the information available to competitors about competing firms' pricing strategies and thus deters cheating from a coordinated plan.<sup>39</sup> Furthermore, because coordination between firms is already established during the standard-setting process, additional coordination in pursuit of explicitly anticompetitive ends is made easier.<sup>40</sup>

The presence of network externalities can actually promote the anticompetitive harm posed by open interoperability standards by providing a mechanism for standard-setting consortia to manipulate consumer acceptance of a standard. Consortia members could thereby squelch competing innovation and maintain market share in markets that otherwise would be characterized by “leapfrogging innovation” and rapidly fluctuating market shares.<sup>41</sup> The levers that standard-setting consortia can pull to so manipulate the market can be labeled “lock-in effect” and “orphan effect.”<sup>42</sup> Both labels describe the incentives faced by consumers to purchase network products.

The lock-in effect, also known as inefficient reluctance to adopt or “excess inertia,”<sup>43</sup> results from a consumer's sunk investment in the products compatible with a particular

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38. Raymond T. Nimmer, *Standards, Antitrust, and Intellectual Property*, in INTELLECTUAL PROPERTY ANTITRUST 1996, at 121, 127-28 (PLI Pats., Copyrights, Trademarks & Literary Prop. Course Handbook Series No. 449, 1996).

39. See, e.g., *National Macaroni Mfrs. Ass'n v. FTC*, 345 F.2d 421 (7th Cir. 1965) (condemning agreement by trade association members to standardize inputs of their products).

40. Nimmer, *supra* note 38, at 124.

41. See Richard T. Rapp, *How Economists See Competition Problems in High-Technology Industries*, 137 A.L.I.-A.B.A. 139, 145 (1995).

42. The orphan effect refers to the desire of consumers to adopt a new standard because of the fear of being “orphaned” in their current standard. This fear is based on the perception that other consumers are or will be switching to the new standard. See *infra* notes 49-52 and accompanying text.

43. See Farrell & Saloner, *supra* note 21, at 71.

standard.<sup>44</sup> As described above, a consumer considering whether or not to purchase a good compatible with a new standard must balance the benefits of purchase (increase in welfare/efficiency from adoption) with the costs of abandoning an established standard that has built up significant network externalities. It is possible that, even though every consumer would prefer a product based on the new standard, the cost to the first switchers of abandoning the network, coupled with the uncertainty that other consumers would also switch and eventually build up the new network, may be so high that no consumers are willing to be the first switchers. Because no one will switch, the new superior standard fails to become adopted and the old inferior standard is locked-in.<sup>45</sup>

There is at least anecdotal evidence, often cited, that shows that the chance of lock-in is not purely theoretical.<sup>46</sup> Consider the case of the QWERTY keyboard (named for the first six letters across the top of the keyboards when read left to right) as the standard keyboard configuration. At the beginning of the century, early typewriters suffered from one persistent problem: the hammers that put the letters on the page tended to jam. The solution to the problem was eventually found in arranging the keyboard so as to slow down the typist, thus reducing the frequency of the jamming.

A few years later, just as the typewriter was gaining the attention of the public, a well-publicized contest was held in Cincinnati to determine the fastest typist. The contestants

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44. See *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 472 (1992) (recognizing that "lock-in" can be a valid source of competitive harm); cf. *Digidyne Corp. v. Data Gen. Corp.*, 734 F.2d 1336, 1340-41 (9th Cir. 1984) (finding market power in aftermarket of computer software); see generally Carl Shapiro, *Aftermarkets & Consumer Welfare: Making Sense of Kodak*, 63 ANTITRUST L.J. 483 (1995).

45. See DOUGLAS G. BAIRD ET AL., *GAME THEORY & THE LAW* 208-13 (1994).

46. See, e.g., Liebowitz & Margolis, *supra* note 18, at 312; Farrell, *supra* note 32, at 37-38; Paul David, *Clio and the Economics of QWERTY*, 75 AM. ECON. REV. 332 (1985).

used rival machines which were equipped with different keyboard arrangements. The contestant that used the QWERTY format (and was, incidentally, the only one to have memorized the keyboard) won. Soon, typing schools began teaching students to memorize the QWERTY format, and the standard was set. In the meantime, the mechanical considerations that led to the QWERTY arrangement had largely been eliminated, and would be completely eliminated with the advent of electric typewriters and computer keyboards.

Some years later, a new keyboard evolved. The “Dvorak” keyboard was claimed to be more efficient because it minimized finger movement, kept the hands on the home row as much as possible, and shifted most of the load to the stronger fingers. It was not only easier to learn, but also allowed faster typing, fewer errors, and lowered stress. According to a study conducted by the United States Navy, investment in retraining a typist on the Dvorak keyboard would be fully repaid ten days after the start of training.<sup>47</sup> Yet, the Dvorak keyboard failed to gain acceptance. According to one pair of commentators, “[n]o one learns to use the Dvorak keyboard because there are so few Dvorak typewriters, and there are so few Dvorak typewriters because no one learns to use the Dvorak keyboard.”<sup>48</sup>

What prevented the Dvorak typewriter from developing into an industry standard was the potential early switcher’s uncertainty of whether other consumers would embrace the new standard. Potential early switchers feared paying the high costs of being the first to adopt a new standard (no network externalities), effectively locking themselves into the then-current standard despite their preference to change.

The orphan effect, also known as inefficient preference to

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47. See David, *supra* note 46, at 334 (discussing the Navy’s study).

48. Stan J. Liebowitz & Stephen E. Margolis, *We Don’t Know Why She Swallowed The Fly: Policy and Path Dependence* (visited May 27, 1997) <<http://www.pub.utdallas.edu/~liebowit/regulatn.html>>.

adopt or “excess momentum,”<sup>49</sup> also results from the powerful incentives on the consumer to capture network externalities. In this case, although consumers prefer the current standard to the new standard—perhaps because the new standard requires investment in training or equipment not compatible with the old standard and not offset by efficiency improvements—they nevertheless adopt the new standard for fear of being “stranded” in an ever shrinking network.

One recent example of the power of the orphan effect was the rapid consumer adoption of Microsoft’s “Windows 95” operating system. Despite numerous news reports that the operating system provided few significant performance advancements,<sup>50</sup> consumers, computer makers, software developers, and retailers rushed to switch to the new standard.<sup>51</sup> The rationale for this stampede was the fear of being stranded in a shrinking network. Said one customer at the time, “I’ll buy [Windows 95] within the first week it comes out. I want to get up to speed on it, so when people are talking about it, I’ll know what they’re talking about.”<sup>52</sup> Comments such as this evince a motivation for investing in Windows 95 that is directly tied to anticipated network

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49. See Joseph Farrell & Garth Saloner, *Installed Base and Compatibility: Innovation, Product Preannouncements and Predation*, 76 AM. ECON. R. 940, 942 (1986); see also *Commentary on the Regulation of New Digital Audio Radio Services: Hearings on Amendment of the Federal Communication Commission’s Rules with Regard to the Establishment and Regulation of New Digital Audio Radio Services Before the Federal Communication Commission*, Washington, D.C. (Jan. 25, 1991) (comment of the staff of the Bureau of Economics and the San Francisco Regional Office of the FTC).

50. See, e.g., Michael J. Miller, *Your Next Operating System*, PC WK., Sept. 26, 1995, at 102 (providing extensive test data comparing Windows 95, OS/2 Warp, Windows NT, Windows 3.1, and MS-DOS); David Berlind, *Be Skeptical of Microsoft’s Windows 95 Claims: Performance and Multitasking Claims for the Operating System May Be Overstated*, PC WK., July 24, 1995, at 69 (presenting analysis of “beta version” of Windows 95).

51. See, e.g., Dawn Yoshitake, *Computer Makers, Retailers Join Microsoft Bandwagon: Special Promotions Churn Anticipation for Windows 95*, L.A. DAILY NEWS, Aug. 14, 1995, at B1; Jim Erickson, *Windows ‘95 Bandwagon Starts to Roll: QVC Channel Leads Market Blitz*, S.F. EXAMINER, July 13, 1995, at B1.

52. Yoshitake, *supra* note 51, at B1.

externalities.

As with the lock-in effect, the orphan effect is a reaction to uncertainty about other consumers' preferences. Consumers, fearful of paying the high costs of being the last switcher (no network externalities), rush to join the new standard despite their preference not to change.

When a firm, or a combination of firms, has the power to influence consumers' expectations about the success of a new standard, they can effectively manipulate the degree of lock-in or orphaning associated with the old standard. By doing so, the firm, or combination of firms, can maintain or improve market position.

For example, during a recent Justice Department investigation, Microsoft was alleged to have engaged in a campaign of "vaporware," or predatory preannouncements of product upgrades.<sup>53</sup> According to the allegations, because Microsoft's market position made it the *de facto* standard for certain software applications, Microsoft prevented rival software producers from selling competing products simply by announcing that a new Microsoft product was on the horizon.<sup>54</sup> Based on these announcements, consumers were reluctant to invest in any competing software (a standard) for fear that other consumers would purchase Microsoft's product. As Judge Stanley Sporkin wrote:

[In the presence of a Microsoft product preannouncement,] consumers and [computer manufacturers] will be reluctant to shift to a new operating system, even a superior one, because it will mean not

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53. Although this accusation was not part of the Justice Department's formal complaint against Microsoft, it was investigated by the Justice Department and by the FTC, and it was one of Judge Sporkin's primary concerns in rejecting the proposed consent decree between Microsoft and the Justice Department. *United States v. Microsoft Corp.*, 159 F.R.D. 318, 334 (D.D.C.), *rev'd*, 56 F.3d 1448 (D.C. Cir. 1995).

54. For some examples of Microsoft's purported "vaporware" campaign, see JAMES WALLACE & JIM ERICKSON, *HARD DRIVE: BILL GATES AND THE MAKING OF THE MICROSOFT EMPIRE* 382, 392-93 (1992).

only giving up on both [their] old operating systems and applications, but also risking the possibility that there will not be adequate applications to run on the superior product. [Thus] Microsoft can hold onto its market share . . . even with the introduction of a competitor's operating system superior to its own.<sup>55</sup>

The effect of the preannouncements was thus to lock-in consumers to the current standard by increasing the uncertainty that a rival standard would be adopted.<sup>56</sup>

The orphan effect may also flow from business strategies that attempt to improve the perception that consumers will adopt a standard. One such strategy is to employ "penetration pricing." Penetration pricing occurs when a firm lowers the price of a product to the initial adopters in order to compensate them for the costs of abandoning an existing network.<sup>57</sup> Once enough consumers have switched to form an attractive new network, the manufacturer can raise the price to all future adopters, thus recouping the initial loss.<sup>58</sup> By aiming the penetration pricing strategy at the members of the old network or standard, a firm can reap a double benefit: in a single move, the firm increases the members of its new network while simultaneously reducing the ranks of the old network. Furthermore, incumbent firms that control the old standard are in a particularly advantageous position to

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55. *Microsoft Corp.*, 159 F.R.D. at 335.

56. See Janusz A. Ordover & Robert D. Willig, *An Economic Definition of Predation: Pricing & Product Innovation*, 91 YALE L.J. 8, 52-53 (1981). Note, however, that there are also pro-competitive aspects of preannouncements, such as informing customers of product choices and inducing efficient decisions to wait to adopt.

57. See Farrell, *supra* note 32, at 43. For example, home video game manufacturers often introduce new hardware platforms with especially attractive licensing terms to game developers as an incentive for adopting the new game platform. See generally DAVID SCHEFF, *GAME OVER: HOW NINTENDO CONQUERED THE WORLD* (1994).

58. Note, however, that there are also pro-competitive aspects of penetration pricing, such as inducing the efficient switching of standards. Cf. *Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993) (indicating that below-cost pricing is not, in and of itself, anti-competitive).

employ this strategy, as they have already- established access to the old networks' members through, for example, existing distribution channels.<sup>59</sup> Thus, the potential for maintenance of market share through manipulation of the orphan effect is especially ripe.

Traditionally, commentators believed penetration pricing could exist only where the firm employing the strategy, known as the sponsor, was in possession of some proprietary technology.<sup>60</sup> Such commentators thought the possession of proprietary technology necessary to prevent other firms from free-riding on the sponsor's investment in establishing the network.<sup>61</sup> Thus, commentators thought penetration pricing was inappropriate for products based on open standards.<sup>62</sup> However, recent research has shown that, in markets for high-technology goods, consumers tend to identify newly introduced technology with the trademark of the firm that first enters the market.<sup>63</sup> This trademark identification, resulting from being the "first mover," is sufficient to thwart free-riding, and thus enables the firm to recoup its investment in penetration pricing.<sup>64</sup>

As mentioned above, the anticompetitive harm posed by

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59. Carl Shapiro, Deputy Assistant Att'y Gen. Dep't of Justice, Antitrust Div., Antitrust in Network Industries, Remarks Before the American Bar Association-American Law Institute (Jan. 25, 1996) (on file with author).

60. Farrell, *supra* note 32, at 43.

61. *Id.*

62. *Id.*

63. See *Testimony Before the Federal Trade Commission, Hearings on Global and Innovation Based Competition* (Nov. 29, 1995) [hereinafter *Hearings*] (testimony of Esther Dyson) (citing Netscape's decision to offer free downloads of its web browser software as an example of an effort to penetrate a market through brand identification); David S. Evans & Bernard J. Reddy, *Some Economic Aspects of Standards in Network Industries and Their Relevance to Antitrust and Intellectual Property Law*, in *INTELLECTUAL PROPERTY ANTITRUST 1996*, at 177, 192 n.22 (PLI Pats., Copyrights, Trademarks & Literary Prop. Course Handbook Series No. 448, 1996).

64. *Hearings*, *supra* note 63 (testimony of F.M. Scherer); cf. Thomas M. Jorde & David J. Teece, *Rule of Reason Analysis of Horizontal Arrangements: Agreements Designed to Advance Innovation and Commercialize Technology*, 61 *ANTITRUST L.J.* 579, 583 (1993).

this manipulation of consumer expectations about the success of a standard is that otherwise superior technology, embodied in a competing standard, will be blocked from the market despite the preference of consumers to adopt it. Analytically, this harm is similar to the theory of predatory innovation rejected by the Court of Appeals for the Second Circuit in *Berkey Photo, Inc. v. Eastman Kodak Co.*<sup>65</sup>

In *Berkey Photo*, the issue was whether the defendant, Kodak, a dominant firm in the camera and film markets, could violate the antitrust laws by changing the film/camera interface standard.<sup>66</sup> The plaintiff, Berkey Photo, alleged that this change inhibited a smaller competitor from introducing technologically innovative products based on the old standard.<sup>67</sup> Because Kodak was the dominant firm in the industry, its decision to change standards was sufficient to induce consumer adoption.<sup>68</sup> However, the *Berkey Photo* court ruled that, even though one of the purposes of the introduction of the new standard was to impede competition, “any firm, even a monopolist, may generally bring its products to market whenever and however it chooses.”<sup>69</sup> This position has found widespread acceptance in subsequent litigation.<sup>70</sup>

The basis of the *Berkey Photo* holding rests on two tenets. First, the court disclaimed the competence to determine whether Kodak introduced a new standard to improve technology (a pro-competitive action) or to inhibit a rival’s inno-

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65. 603 F.2d 263 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980).

66. *Id.* at 276-78.

67. *Id.* at 279.

68. *Id.*

69. *Id.* at 286.

70. *See, e.g.*, ILC Peripherals Leasing Corp. v. International Business Machs. Corp., 458 F. Supp. 423 (N.D. Cal. 1978), *aff’d*, *Memorex Corp. v. International Business Machs. Corp.*, 636 F.2d 1188 (9th Cir. 1980), *cert. denied*, 452 U.S. 972 (1981) (rejecting the claim that IBM had manipulated the design of its mainframe interfaces to defeat compatibility with peripheral equipment made by other firms); *see generally* Ross D. Petty, *Antitrust and Innovation: Are Product Modifications Ever Predatory?*, 22 SUFFOLK U. L. REV. 997 (1988).

vation (an anti-competitive action).<sup>71</sup> As the court noted:

[N]o one can determine with any reasonable assurance whether one product is ‘superior’ to another. Preference is a matter of individual taste. The only question that can be answered is whether there is sufficient demand for a particular product to make its production worthwhile, and the response, so long as the free choice of consumers is preserved, can only be inferred from the reaction of the market.<sup>72</sup>

While the reasoning of the *Berkey Photo* court is generally valid, it breaks down in the presence of network externalities. As demonstrated above, the desire to capture network externalities, and the fear of losing those externalities, makes the “reaction of the market” likely to misrepresent the consumer’s true preference. Recognizing this, *Berkey Photo* should not be extended to network industries where the presence of network externalities coerces consumers by removing their “free choice.”<sup>73</sup>

The second tenet underlying *Berkey Photo* decision is the fact that Kodak acted unilaterally. As the court noted, the antitrust laws are applied much more leniently towards single-firm conduct than multi-firm conduct.<sup>74</sup> For this reason as well, the holding in *Berkey Photo*, which fails to recognize the anticompetitive harm associated with unilateral predatory innovation, likely does not reach the similar harms

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71. *Berkey Photo*, 603 F.2d at 286-87.

72. *Id.* at 287.

73. Cf. Ordover & Willig, *supra* note 56, at 52-53 (favoring scrutiny of certain forms of single firm innovation). Note, however, that the problem of competence of the courts to determine when a new standard is pro-competitive or anti-competitive remains, and perhaps is even made more difficult once reliance on market performance is shown to be unreliable. In this sense, the reluctance of the *Berkey Photo* court to intervene remains valid. See *infra* part III; compare Ordover & Willig, *supra* note 56, at 52-53 with Joseph Gregory Sidak, *Debunking Predatory Innovation*, 83 COLUM. L. REV. 1121 (1983) (arguing for judicial restraint in finding antitrust liability in a firm’s efforts to market its innovations).

74. *Berkey Photo*, 603 F.2d at 304.

posed by multi-firm standard-setting consortia.<sup>75</sup>

The danger posed by manipulation of the lock-in and orphan effects is that a standard-setting consortia can, through these mechanisms, establish market dominance for their standard, and retain that dominance by introducing successive “next generation” standards that do not necessarily advance technology or promote innovation.<sup>76</sup> As Carl Shapiro, former Deputy Assistant Attorney General in the Antitrust Division of the Department of Justice, recently stated, “the primary method by which today’s network monopolist can maintain its monopoly may well be to extend its control . . . to the next generation of technology.”<sup>77</sup> When firms are allowed to come together to set standards, which ultimately define each successive generation of technology, they indeed establish a ripe environment for producing anticompetitive abuses.

## II. UNITED STATES AND EUROPEAN UNION ANTITRUST ENFORCEMENT REGIMES’ SCRUTINY OF COLLECTIVE STANDARD-SETTING BODIES

As Part I demonstrates, there are both significant and substantial pro-competitive benefits and anticompetitive

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75. This is especially likely considering the fact that multi-firm standard-setting may actually be more likely to induce coercion of consumers than single-firm conduct because the standards agreement itself will encourage the perception that the agreed upon standard will be adopted.

76. It is interesting to note the recent and growing practice of many software makers to use a product’s release year in that product’s title (e.g., Windows 95, Microsoft Office 97, Quicken 97, and Lotus Notes 97). This practice may be gaining popularity because of its potential to manipulate the orphan effect and thereby extend a producers’ control of market share into future product generations. For example, in 1994 (via preannouncements) and 1995, Windows 95 may have appeared attractive to consumers, at least in part, because its name implied new technology. But, by 1999, the same name may invoke a perception of obsolescence. Thus, despite the likelihood that in four years Windows 95 will still be technologically sufficient for many or even most users (as well as economically efficient compared to the cost of upgrading) consumers may be more inclined to upgrade to “Windows 99” due to anxiety over being left with outdated technology and a decreasing network of users.

77. Shapiro, *supra* note 59.

harms associated with open standard-setting consortia. Because of this, and the scrutiny traditionally applied to express agreements between horizontal competitors, one would expect the antitrust enforcement authorities, both in the United States and in Europe, to take a close look at such consortia. Nonetheless, in both the United States and in Europe, collective standard-setting consortia are virtually guaranteed approval without individualized scrutiny, thus establishing a prescription for anticompetitive abuse. This part explains the policies of both the United States and the European Union toward standard-setting consortia.

#### A. *United States Enforcement*

Current United States enforcement policy toward standard-setting consortia derives from the joint Department of Justice and FTC (“agencies”) Antitrust Guidelines for the Licensing of Intellectual Property (“Guidelines”).<sup>78</sup> Section 3.2.3 of the Guidelines presents the agencies’ treatment of innovation markets.<sup>79</sup> This section appears to acknowledge

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78. DEP’T OF JUSTICE/FEDERAL TRADE COMM’N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY [hereinafter 1995 INTELLECTUAL PROPERTY GUIDELINES], reprinted in 4 Trade Reg. Rep. (CCH) ¶ 13,132 (Apr. 6, 1995) (issued jointly by the Justice Department and the FTC). While the Guidelines deal explicitly with licensing agreements and practices, collective open standard-setting consortia closely resemble, and may actually include, aspects of patent pooling and cross-licensing arrangements that are dealt with in the Guidelines. Note that this Essay is explicitly limited to the treatment of *open* collective standard-setting consortia. Thus, parallels to licensing arrangements are only relevant where the license fee and/or royalty is either “fair and reasonable” or free. As most of the Guidelines are concerned with anticompetitive restraints involving fees and/or royalties, these sections do not apply to open standard-setting consortia. This fact is the basis for this section’s argument that current enforcement policy towards collective open standard-setting consortia is unwisely weak.

79. Section 3.2.3 states, in pertinent part:

A licensing arrangement may have competitive effects on innovation that cannot be adequately addressed through the analysis of goods or technology markets. For example, the arrangement may affect the development of goods that do not yet exist. Alternatively, the arrangement may affect the development of new or improved goods or processes in geographic markets where there is no actual or likely potential competition in the relevant goods.

the potential harm posed by collective standard-setting consortia. According to one commentator, section 3.2.3 expresses that the “key competitive concern with respect to innovation markets is that a reduction in the number of independent R&D paths could lead to a slackening of the efforts to develop new products.”<sup>80</sup>

While a dearth of new technology may well be the agencies’ concern, the efficacy of the Guidelines to control the harm presented by open collective standard-setting consortia is clearly self-limited. This is true for two reasons. First, the Guidelines expressly indicate that competitive concerns are limited to circumstances in which there are four or fewer independent entities with the incentives to engage in comparable research and development efforts.<sup>81</sup> In network industries, firms often produce either complementary or rival goods that have the potential to engage in non-standard innovation. The incentive to perform this research always exists in theory because the rewards from implementing the next standard can be enormous. However, in practice, as was shown above, the incentive to compete against an open standard-setting consortium is marginal because the very fact that the consortium exists makes it likely that consumers will accept, and adhere to, its standard.<sup>82</sup> The Guidelines make no distinction between these types of incentives.

Second, and more importantly, the Guidelines explicitly state that the agencies generally will not scrutinize non-

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An innovation market consists of the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development. The close substitutes are research and development efforts, technologies, and goods that significantly constrain the exercise of market power with respect to the relevant research and development, for example by limiting the ability and incentive of a hypothetical monopolist to retard the pace of research and development.

*Id.* § 3.2.3, reprinted in 4 Trade Reg. Rep. (CCH) ¶ 13,132 (Apr. 6, 1995).

80. Joseph Kattan, *Perspectives on the 1995 Intellectual Property Guidelines*, ANTITRUST, Summer 1995, at 12.

81. *Id.* (citing Guidelines § 4.3 and Example 4).

82. See *supra* notes 32-33 and accompanying text.

exclusive agreements. This exclusion would necessarily include open collective standard-setting consortia. Section 4.1.2 states, in relevant part:

A non-exclusive license of intellectual property that does not contain any restraints on the competitive conduct of the licensor or the licensee generally does not present antitrust concerns even if the parties to the license are in a horizontal relationship, because the non-exclusive license normally does not diminish competition that would occur in its absence.<sup>83</sup>

Thus, all the potential harms,<sup>84</sup> that flow from the very fact that the openness of the standard increases the likelihood that the standard will be accepted due to network externalities, are beyond the reach of the Guidelines.

The Guidelines, however, are not the only source of information concerning the agencies' permissive policy toward open standard-setting consortia. The cases filed by both the FTC and the Justice Department indicate that the lack of restrictive licensing arrangements will inoculate a standard-setting consortia from antitrust scrutiny. This conclusion follows from the fact that those cases brought by the agencies that alleged anticompetitive interference with innovation have all been resolved when the party under investigation agreed to openly license its technology.<sup>85</sup> Thus, as in the Guidelines, the United States enforcement agencies do not show any appreciation for the fact that, in network in-

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83. 1995 INTELLECTUAL PROPERTY GUIDELINES, *supra* note 78, § 4.1.2, reprinted in 4 Trade Reg. Rep. (CCH) ¶ 13,132 (Apr. 6, 1995).

84. See *supra* part I.B.

85. See, e.g., *United States v. Automobile Mfrs. Ass'n*, 1982-83 Trade Cas. (CCH) ¶ 65,088 (C.D. Cal. 1982) (Justice Department consent decree resolving alleged conspiracy by auto manufacturers to obstruct the development of pollution control devices by mandating compulsory non-exclusive licensing); *In re American Home Prods.*, 59 Fed. Reg. 60,807 (1994) (FTC consent order resolving alleged anticompetitive harm to research and development of Rotavirus vaccine by combination of pharmaceutical companies by mandating compulsory licensing of relevant technology); cf. *Berkey Photo*, 603 F.2d at 303-04 (plaintiff, Berkey Photo, sought remedy of mandatory disclosure of product innovations).

dustries, open licensing may only further reduce pro-competitive investments in innovation by improving the perception that consumers will adopt a particular standard, thereby coercing rivals into acceptance.

### B. *European Union Enforcement*

The basis of competition policy in the European Union (“EU”) lies within Articles 85 and 86 of the EC Treaty.<sup>86</sup> Article 85(1) prohibits agreements and concerted practices between two or more enterprises that restrict competition within the EU.<sup>87</sup> Article 85(3) permits the Commission of the European Communities (“Commission”) to grant exemptions to firms whose activities fall under Article 85(1).<sup>88</sup> The

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86. Treaty Establishing the European Community, Feb. 7, 1992, [1992] 1 C.M.L.R. 573 [hereinafter EC Treaty], incorporating changes made by Treaty on European Union, Feb. 7, 1992, O.J. C 224/1 (1992), [1992] 1 C.M.L.R. 719, 31 I.L.M. 247.

87. *Id.* art. 85(1), [1992] 1 C.M.L.R. at 626. According to Article 85(1) of the EC Treaty:

The following shall be prohibited as incompatible with the common market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market, and in particular this which: (a) directly or indirectly fix purchase or selling prices or any other trading conditions; (b) limit or control production, markets, technical development, or investment; (c) share markets or sources of supply; (d) apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage; (e) make the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

*Id.*

88. *Id.* art. 85(3), [1992] 1 C.M.L.R. at 626. According to Article 85(3) of the EC Treaty:

The provisions of paragraph 1 may, however, be declared inapplicable in the case of: (a) any agreement or category of agreements between undertakings; (b) any decision or category of decisions by associations of undertakings; (c) any concerted practice or category of concerted practices; which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and

Commission, in addition to having the power to grant individual exemptions under Article 85(3), also promulgates block exemptions that instruct firms that the Commission will not challenge specified conduct, thereby allowing firms to engage in such conduct without notifying the Commission. Generally, block exemptions contain three “lists” of practices: a “black” list, containing prohibited practices; a “gray” list, containing permitted practices; and a “white” list, prescribing practices required to qualify for the exemption.<sup>89</sup>

The Commission has promulgated two block exemptions under which open standard-setting consortia are almost completely inoculated from the danger of scrutiny by the Commission. The first block exemption applies to research and development joint ventures, which, as mentioned above, are similar to standard-setting consortia in that a combination of firms agree to pursue a unified research objective.<sup>90</sup> The second block exemption applies to licensing of intellectual property, the provisions of which are even more lenient than the U.S. Guidelines.<sup>91</sup> Because both of these block exemptions contain gray lists allowing consortia members to establish exclusive rights and licenses, it is a near certainty that the exemptions will cover the traditionally less-suspicious open access to industry interface standards that an open standard-setting consortium affords to all parties.<sup>92</sup>

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which does not: (i) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives; (ii) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.

*Id.*

89. Maria Sendra, *Strategic Alliances for Innovation in the Global Market of the 1990s: A Comparative Study of the Relationship Between Innovation and the Patent/Antitrust Mechanisms of the United States and the European Economic Community*, 9 INT'L TAX & BUS. LAW. 382, 389-90 (1992).

90. Commission Regulation No. 418/85, O.J. L 53/5 (1985); see also *supra* note 78.

91. Commission Regulation No. 2349/84, O.J. L 113/34 (1985).

92. See Nhat D. Phan, *Leveling the Playing Field: Harmonization of Antitrust Guidelines for International Patent Licensing Agreements in the United States, Japan, and the European Union*, 10 AM. U. J. INT'L L. & POL'Y 447, 464 n.90 (1994); see *gen-*

Taken together, these block exemptions allow members of open standard-setting consortia to take advantage of the potential anticompetitive effects discussed above in Part I: to establish barriers to entry to innovation markets; to coerce inefficient over-investment in upgrades; and to leverage future market power by basing standards on technologies that favor consortia members in order to capture first-mover advantages and trademark identification.

### III. PRACTICAL IMPEDIMENTS TO A MORE RIGOROUS ANTITRUST REVIEW

The fact that the current United States and European enforcement strategies allow for anticompetitive harm to flow virtually unchecked from open standard-setting consortia does not inexorably lead to the conclusion that the antitrust enforcement agencies ought to increase their intervention. After all, as a former Assistant Attorney General at the Antitrust Division observed, “the essential insight of the ‘Chicago School’ is not that markets work perfectly, but rather that the market generally works better than government intervention.”<sup>93</sup> In the case of monitoring open standard-setting consortia for the presence of anticompetitive abuse, that insight can be powerfully applied.

The first impediment to crafting more rigorous antitrust review of open standard-setting consortia is that intrusive examination can cause delays in technological advancement that outweigh the benefits of catching, or even deterring, anticompetitive behavior. If the purpose of antitrust review is to promote socially beneficial innovation, then the review itself must be careful not to impose delays—compliance with CIDs<sup>94</sup> or lengthy litigation—that would deter firms from

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erally A. Lynne Puckett, *European Competition Law: Managing the “Chameleon” of Antitrust-Technology Joint Ventures*, 19 MD. J. INT’L L. & TRADE 47 (1995).

93. Charles F. Rule, *Claims of Predation in a Competitive Market Place: When Is an Antitrust Response Appropriate?*, 57 ANTITRUST L.J. 421, 426 (1988).

94. A CID or “civil investigative demand” is a procedure whereby the Antitrust Division of the Justice Department may compel, without filing a complaint,

investing in innovation or bringing that innovation to the market.<sup>95</sup>

Second, the concern of the *Berkey Photo* court—that the courts are institutionally ill-suited to determine the competitive merit of technological standards<sup>96</sup>—not only remains, but may also apply with equal force to the government enforcement agencies. Interface standards are likely to involve highly technical specifications.<sup>97</sup> Attempting to determine whether technical specifications are incorporated into a standard for pro-competitive technology-enhancing purposes, or anticompetitive innovation inhibiting purposes, may be a task beyond the competence of either the government or the courts. This is especially true in network industries where reliance on market acceptance of a standard, the method used by the *Berkey Photo* court, may not be an accurate indicator of that standard's social value.

Third, there is no reliable (or perhaps even conceivable) objective standard for determining the efficient level of innovation in the absence of an open standard-setting consortium. Part of the problem is that the economics that describe the potential harms caused by open standard-setting consortia is still in its infancy and thus not fully developed.<sup>98</sup> Economists studying the antitrust implications of networks have advanced to the stage of identifying the harm, but not to the point of establishing a usable test for determining whether that harm has manifested.<sup>99</sup> Without such a test, the prevention of anticompetitive harm may fail to outweigh

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the production of documentary material to determine whether there has been a civil violation of the antitrust laws. 15 U.S.C.A. §§ 1311-1314 (West Supp. 1996).

95. See Jorde & Teece, *supra* note 64, at 590.

96. *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 286-87 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980).

97. See, e.g., *DVDs Agreement: Who Won, Who Lost?*, CONSUMER ELECTRONICS, Sept. 25, 1995, at 13.

98. See Jorde & Teece, *supra* note 64, at 590; Shapiro, *supra* note 59.

99. Compare Ordover & Willig, *supra* note 56, 52-53 (arguing that such objective standards are economically definable) with Sidak, *supra* note 73, 1121 (arguing that the standard advanced by Ordover and Willig misses many important pro-competitive aspects of innovation and favoring a per se validity approach).

the costs of intervention.

Finally, because of the difficulties in constructing a post-agreement test for the presence of anticompetitive harm caused by an open standard-setting consortium, the sponsors of rival, but inferior, non-standard technology could manipulate the courts into forcing the open standard-setting consortium to accept the rival's inferior standard. In fact, some commentators have suggested that this very scenario has already arisen<sup>100</sup> in *Addamax Corp. v. Open Software Foundation, Inc.*<sup>101</sup>

*Addamax* involves the very issues of potential anticompetitive harm that form the basis of this Essay. Addamax is a manufacturer/producer of security systems for computer operating systems.<sup>102</sup> The Open Software Foundation ("OSF") is an open standard-setting consortium formed for the purpose of standardizing computer operating system software.<sup>103</sup> The OSF was founded by some of the largest computer companies in the world, including IBM, Hewlett-Packard, and Digital.<sup>104</sup> Because of the market share of its members, the OSF standard generally gains immediate consumer acceptance.

The OSF chose to incorporate into its operating system a security system manufactured by a rival of Addamax. Addamax claimed that this selection was based not on the price or quality of the rival system, but rather on the desire to benefit the incumbent technology of certain OSF members.<sup>105</sup> Addamax further claimed that the OSF's selection was anticompetitive because the presence of network externalities insured that the selected (and supposedly inferior) technology was guaranteed acceptance in the market, to the exclu-

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100. Kattan, *supra* note 15, at 5.

101. 888 F. Supp. 274 (D. Mass. 1995).

102. *Id.* at 276.

103. *Id.* at 277.

104. *Id.*

105. *Id.* at 278.

sion of Addamax's supposedly superior technology.<sup>106</sup> The court found this allegation sufficient to survive OSF's summary judgment motion.<sup>107</sup>

There are at least two problems presented by *Addamax*. First, by what standard is a court to judge Addamax's software technologically superior to its rival's?<sup>108</sup> Second, even if such a comparison is possible and Addamax can make a compelling case that its software is technologically superior, how would a court balance the harm to competition posed by a reduction in technological advancement against the significant benefits of standardization? The difficulties in solving these problems represent the real impediments to a more proactive scrutiny of open standard-setting consortia by United States and European enforcement authorities.

#### IV. PROPOSAL FOR INCREASED ANTITRUST SCRUTINY OF OPEN STANDARD-SETTING CONSORTIA

Despite the impediments, and given the difficulties in accurately assess balancing the pro-competitive benefits and anticompetitive harms posed by open standard-setting consortia, some degree of scrutiny is necessary to prevent "the formation of groups whose intent is to use standard setting as a cloak for anticompetitive activities."<sup>109</sup> Fortunately, there are at least two steps that the enforcement agencies can take to reduce the potential for abuse presented by these consortia, without unduly burdening them or slowing the introduction of innovation in the market.

First, enforcement agencies can examine the process by

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106. *Addamax*, 888 F. Supp. at 284-85.

107. *Id.*

108. The court never had to reach this question because Addamax was able to make a threshold showing that the rival was selected without regard for technological merit, which was sufficient to allow it to survive summary judgment. *Id.* at 280. This type of evidence presents a potential avenue for increased scrutiny by the enforcement agencies. *See infra* part IV.

109. James J. Anton & Dennis A. Yao, *Standard-Setting Consortia, Antitrust, and High Technology Industries*, 64 ANTITRUST L.J. 247, 264 (1995).

which collective standard-setting consortia settle upon a standard. This examination need not focus on technical determinations of the superiority of superior standards. Instead, the agencies can focus on such factors as access to the consortium by an array of rival firms, procedural fairness in selecting the technology to adopt, and genuineness of criteria used to evaluate rival technologies. The *Addamax* court validated the merit of this type of examination when the court rejected OSF's summary judgment motion upon a proffer that the consortium was disingenuous in evaluating the technological merits of the rival software systems.<sup>110</sup> Of course, a finding of procedural defects does not substitute for a finding of anticompetitive effect;<sup>111</sup> however, given the pro-competitive benefits of standard-setting consortia, examination of procedural defects could help screen out those consortia where the burden of delay is likely to outweigh the benefits of examination.

Second, the agencies could engage in a "quick look" rule of reason analysis where the presumption is for validity. Essentially, this approach would ask whether there is a reasonable basis on the merits for the promulgated standard. While some technical investigation is necessary under this approach, the liability threshold would be placed high enough to eliminate much of the burden on the pro-competitive standard-setting consortium to justify its standard. Factors such as the market position or technological advantages of the consortium members could be examined, as could evidence proffered by the opponents of the standard. However, to avoid the potential for misuse by competitors promoting technologically inferior products, the approach would permit the promulgated standard even if the

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110. *Addamax*, 888 F. Supp. at 285. *But see* *Northwest Wholesale Stationers v. Pacific Stationery & Printing Co.*, 472 U.S. 284, 293 (1985) ("the absence of procedural safeguards can in no sense determine antitrust analysis . . . because the antitrust laws do not themselves impose on joint ventures a requirement of process").

111. *Northwest Wholesale Stationers*, 472 U.S. at 293.

evidence were to weigh in favor of a rival standard. All that would be required is some credible showing that the promulgated standard can reasonably be supported on the merits.<sup>112</sup>

#### CONCLUSION

There is little doubt that open standards can have pro-competitive effects in the market for high technology goods. Consumers obviously benefit from capturing network externalities: using and exchanging interchangeable DVDs, CDs, and floppy disks. Producers benefit by avoiding inefficient investment in incompatible, non-superior technology. However, the question of whether these and other benefits of open standards justify the relaxation of antitrust's traditional mistrust of horizontal agreements must be carefully considered given the potential for the anti-competitive market manipulation by standard setting consortia. Consumers may end up as net losers when the gains from standardization are balanced against the losses of reduced extra-standard innovation and inefficient manipulation of technology selection in favor of consortia members.

Unfortunately, it may well be beyond the competence of the antitrust enforcement agencies to accurately and efficiently perform such a balancing. However, the enforcement agencies should not permit this difficulty to become an excuse for abdicating their mandate to ensure and promote active competition. Instead, by examining the fairness and genuineness of a consortium's standard-setting process and by performing a "quick look" review of the merits of a proposed standard, the enforcement agencies can thwart those that would abuse open standard-setting consortia without jeopardizing the efficiency-enhancing effects generated by standards in network industries.

While these steps may not stop all abuses, they would do

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112. See Anton & Yao, *supra* note 109, at 264.

more to prevent abuse than does the virtual per se validity given to open standard-setting consortia by United States and European enforcement agencies today. Though it may be true that, on the whole, the pro-competitive benefits of open standard-setting consortia outweigh the potential harms, one must remember that “government policies and private responses to policy interact.”<sup>113</sup> Without some level of government scrutiny, therefore, the anticompetitive potential of open standard-setting consortia may move from predominantly theoretical to distressingly manifest.

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113. *Id.*