



The Computer & Communications Industry Association (CCIA) is a nonprofit membership organization for companies and senior executives from diverse sectors of the computer and communications industry. CCIA was established nearly three decades ago to represent our members' vital interests, especially the need to promote competitive and fair open markets, open systems, and open networks. Our member companies range from small start-ups to global leaders that operate in all aspects of the high-tech economy. Our member companies employ nearly a million workers and generate over \$250 billion in annual revenue.

Dear Mr. Heimert, Esq:

I submit these comments on behalf of the Computer & Communications Industry Association. We will continue to monitor the issues being examined by the Antitrust Modernization Commission and plan further submissions.

I hope to be able to present these views and address questions at the appropriate public hearings.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ed Black', written in a cursive style.

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COMMENTS OF THE COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION (CCIA)*

WORKING GROUP ON THE NEW ECONOMY

The central question being examined by the Working Group on the New Economy revolves around one major difficulty: whether “New Economy” industries warrant different treatment under traditional antitrust law. Phrased differently, do the defining characteristics of modern “innovation-driven” markets present clear justification in distinguishing between the “old” and “new” economies in the application of antitrust enforcement? We recognize that there are specific characteristics of the New Economy that call for a modernization of the evaluation procedure, but we strongly reject the idea that New Economy industries deserve more lenient treatment under traditional antitrust doctrine. Furthermore, the presence of “network effects” in many high-tech industries might make antitrust enforcement more important because the barriers to entry created by the subsequent consumer “lock-in” make achieved market power hard to reverse.

Because of the importance increased innovation is likely to have in the future economy, the answer to this question—and its subsequent effect on competition policy—will have profound implications that reverberate long into the future. Although the distinctive features of New Economy industries present certain challenges to antitrust enforcers, advancement in modern economics provides a useful framework from which to adequately address these new concerns. Furthermore, the very act of classifying the specific markets that would qualify for New Economy antitrust exemptions would present significant problems and likely trigger time-consuming and costly litigation. The very nature of the new information-driven economy has compelled many traditional “old” economy companies—such as Barnes & Noble, Ikea, and the GAP—to adapt their production and distribution channels to rely heavily on computer networks and Internet distribution. The dynamic innovation, network effects, and intellectual property competition characteristic of many New Economy companies have been present to different degrees in many industries and do not warrant privileged antitrust treatment.

Enforcement agencies and the courts have proven to be effective at realizing their own limitations when dealing with the novel concerns posed by new industries. Though they are far from infallible, they have typically proceeded cautiously when faced with

* CCIA’s response to the National Academies Board on Science, Technology, and Economic Policy and the Federal Trade Commission reports on the patent system are in a concurrent submission.

such challenges, waited for a more substantial body of cases, and adapted efficiently when presented with contemporary dilemmas. Rigid statutory limitations restricting the capacity of the courts to make the nuanced decisions necessary under antitrust law has the potential to cause far more harm than good. Especially at this point, when New Economy antitrust doctrine is still in its relative infancy. At this juncture, there is no consensus that the application of antitrust doctrine impedes innovation.¹ However, there is significant anecdotal evidence that the elimination of rivalry in research and development lessens the pace of innovation.²

Calls for “special industry” exemptions to antitrust are almost as old as the antitrust law itself. One of the first cases to make it to the Supreme Court under the Sherman Act was *United States v. Trans-Missouri Freight Association* in which the defendants argued that the specific nature of the railroad industry (high-fixed costs which would lead to damaging competition) made it impractical to enforce antitrust policy. The Court rejected their argument and stated that trusts or monopolies may be unique to specific types of industries, but “they all have an essential similarity, and have been induced by motives of individual or corporate aggrandizement as against the public interest.”³

We recognize that some of the innate features of many New Economy industries tend to have significant natural monopoly characteristics. However, this does not provide adequate rationale for more lenient antitrust policy for these industries. In fact, it implies quite the opposite. Antitrust laws must remain in place to prevent firms from abusing the significant market power they are likely to obtain. Of course, it is not our contention that market power in and of itself is illegal—especially given the tendencies of several high-tech markets. It is the anticompetitive abuse of this market power that impedes innovation, harms consumers, and ultimately produces socially inefficient (and potentially dangerous) outcomes. The Commission could provide special guidance to the courts and enforcement agencies in regards to specific problems posed by the New Economy—such as in standard setting and monopoly leveraging. The overall goal should be to develop a more nuanced model of competition in New Economy markets, not to limit the application of antitrust law to this crucial economic sector.

Assessing Market Power and Mergers in New Economy Sectors

The assessment of market power has always played a pivotal role in the government’s antitrust policy. Although the specific uniqueness of New Economy markets should be taken into account when defining a high-tech company’s market power, traditional antitrust policy can be readily adapted to achieve this goal. The

¹ See Jonathon B. Baker, *Fringe Firms and Incentives to Innovate*, 63 Antitrust L.J. 621, 639-41 (1994-95).

² Richard J. Gilbert and Steven C. Sunshine, *The Use of Innovation Markets: A Reply to Hay, Rapp, and Hoerner*, 64 Antitrust L.J. 78 (1995-96).

³ *United States v. Trans-Missouri Freight Association*, 166 U.S. 290 (1897). See Jonathon M. Jacobson, *Do We Need a ‘New Economy’ Exception for Antitrust*, *Antitrust* magazine (Fall 2001).

structural components of market power (defining the relevant market, measuring market share, and determining market entry conditions) can still be used as an adequate assessment tool for determining market power in New Economy markets.

The traditional method of defining relevant markets as suggested by the *1992 FTC/DOJ Horizontal Merger Guidelines (Guidelines)* can still be successful when applied to innovation-driven industries. The smallest collection of products for which a hypothetical monopolist can impose a “small but significant and non-transitory increase in price” above pre-merger (in the case of merger analysis) or the competitive level (for a non-merger analysis) is still useful for antitrust enforcement in the New Economy. We do realize that specific considerations need to be taken, but by no means does this suggest the current system needs to be scrapped—just modernized. The dynamic nature of high-tech industries does place considerable importance on market definition being sufficiently forward looking in order to anticipate “uncommitted” entrants as possible competitors. However, these future extrapolations must adequately reflect that significant barriers to entry still exist in these markets. The two-year time frame of the *Guidelines* remains salient to technology markets, because the speed of entry must reflect the market-redefining potential of innovation. However, this should be viewed as merely an appropriate starting point for dynamic markets, potential anti-competitive harm may not materialize until several years into the future. Some firms with considerable market power might forego short-term price increases in favor of solidifying their long-run market dominance. Antitrust authorities should examine not just the short-term effects of market power, but also the inhibition of future innovation and its long-term effect on the market in question. There may indeed be specific circumstances where lengthening or shortening the two-year time frame might be appropriate given certain market conditions, but any such adjustment should hinge on robust supporting evidence.

Once the relevant market has been determined, the next step in antitrust cases typically involves measuring the market share of those firms judged to fall within the range of the relevant market. In innovation-driven markets, a historical-market share analysis can fail to measure a firm’s future competitive significance if market conditions are changing due to technology shifts. For example, if a market demonstrates significant network effects and high consumer “lock-in” due to switching costs, then the market power of a firm might be higher than it currently appears.⁴ Conversely, potential entrants (if sufficiently capitalized) can have greater constraining influences in technology markets, due to the speed of innovation and the profound “tipping” effects of positive network externalities. Because of the importance of demand-side characteristics in determining the competitive future of certain New Economy markets, it would be useful for antitrust authorities and the courts to develop demand-side metrics in order to more accurately measure the impact of market concentration. Another central concern in a market share analysis is to distinguish legitimate, market-deconcentrating potential entrants from second-tier, marginally innovative “me too” competitors.

Many proponents of lax antitrust enforcement in New Economy industries claim that market power is transient in many high-tech sectors—especially software markets—

⁴ See Michael L. Katz and Carl Shapiro, *Antitrust in Software Markets* at 16 (Sept. 22, 1998).

because new entrants often do not require significant investment in tangible capital to produce a viable product. Although the romantic notion that a computer science major can produce the next “killer application” in his or her dorm room might have been true two or three decades ago, it is certainly far less likely now. The large body of patents and copyrights that currently exist presents an extremely difficult hurdle for new entrants without considerable financial backing to overcome. The high likelihood of infringement litigation presents a new entrant significant concerns especially due to the expensive and time consuming nature of such litigation.⁵ Furthermore, barriers to entry can still be prohibitively high if network effects and high switching and coordination costs are present—even with rapid technological change. These make it extremely difficult for new competitors to capture market share even if they have a better product. Thus, barriers to entry in technology markets are more than the scale economies and huge capital costs characteristic of brick-and-mortar industries. In addition, some high-tech markets (e.g., microprocessors) also exhibit the more traditional entry barriers. The claim that New Economy industries currently enjoy low entry barriers is simply erroneous, and high-tech antitrust policy should be designed with these considerations in mind.

Mergers

The FTC/DOJ *Guidelines* were specifically designed to be adaptable to a wide spectrum of industries.⁶ As previously discussed, unique market attributes do not present a compelling reason to exempt innovation-driven markets from traditional antitrust enforcement. Instead of making an industry-wide change to an antitrust system that has served its purpose up to this point, the enforcement agencies should examine each merger on its precise, factual merits. This is consistent with the traditional, fact-specific approach applied to merger and antitrust analysis by the courts and enforcement agencies for decades. As stated by the FTC, the correct conceptual framework for addressing mergers is to determine whether a merger would create credible efficiencies that would be likely to deter the exercising of post-merger market power. Along these lines, FTC/DOJ action against anticompetitive mergers has largely proven effective in the past.

The Justice Department’s opposition to the proposed Microsoft-Intuit merger illustrates how reasonable intervention can preserve competition in New Economy markets. If the merger had been completed, competition in the personal finance software market would have been almost completely extinguished. Although critics of the DOJ intervention argued that creation of a ubiquitous standard would help serve as a shortcut to industry development, they ignored the long-term effect of a loss in competition and

⁵ Intellectual Property concerns will be dealt with more extensively in proceeding IP section.

⁶ “The New Horizontal Merger Guidelines observe, as did the 1984 Guidelines, that the specific standards they set out must be applied in a wide variety of factual circumstances, mechanical application of those standards could produce misleading results. Thus, the Guidelines state that the agencies will apply those standards reasonably and flexibly to the particular facts and circumstances of each proposed merger.” See Introduction to FTC/DOJ guidelines (rev. April 8, 1997).

the lock-in effects created by such a standard.⁷ This continued competition between Microsoft and Intuit opened the way for a small firm—MECA software—to become a major competitor. MECA created a software package called Managing Your Money, which was marketed directly to banks who packaged it with their own online banking service available to their customers. Two years after the merger was abandoned, MECA was distributing 45,000 copies of their software each month. Such competition prevented any one company from gaining proprietary control over the online commerce standards and encouraged competitors to build “core open standards into the online financial economy.”⁸ The DOJ has pursued successful intervention in other sectors of the New Economy as well. The highly visible proposed merger between MCI and Sprint would have “densely concentrated domestic and international long distance, Internet backbone and data network markets” and is generally perceived as a sound application of antitrust policy.⁹

We recognize that enforcement agencies are not perfect. But the very nature of our adversarial justice system, when taken as a whole, has compensated effectively and proved itself not to be anti-merger. Many mergers are indeed efficiency enhancing and do not produce significant competitive harm in a market. When the DOJ overreaches, the courts have served as an adequate check on their powers. The courts ruled against the DOJ when the agency attempted to block the Oracle-Peoplesoft merger. The federal judge ruled that plaintiffs had not proven that in a post-merger world Oracle would possess a significant market share and pointed to many other companies who offered similar products.

There is no pressing need to create a new, untested framework for merger analysis. “Innovation markets” may in some cases, be more important to competitive market structure in tech industries than product markets. Given high research and development costs, innovation powers the efficiency-enhancing characteristics of software and other tech markets. In order to more effectively promote innovation, the DOJ/FTC should examine innovation markets separately from affected product markets. Where innovation is particularly important, consider intervention even if few adverse effects are anticipated in specific product markets. Society is usually best served when competition creates multiple sources of innovation. Therefore, antitrust policy is crucially linked with markets for innovation and can produce the same efficient outcomes in them that it has in product markets.

⁷ Nathan Newman, *The Microsoft-Intuit Merger: The Intervention that Worked and the Dangers Today from Microsoft's Monopoly Practices in the Online Financial Marketplace*, <<http://www.netaction.org/msoft/finance/MS-Intuit.html>>

⁸ *Id.*

⁹ Lawrence A. Sullivan, *Is Competition Possible in High Tech Market: An Inquiry Into Antitrust, Intellectual Property, and Broadband Regulation as Applied to “The New Economy,”* 52 Case Western Res. L. J. 41 (2001-2002).

Intellectual Property and the New Economy

When coupled with antitrust law, intellectual property (IP) law plays an instrumental role in stimulating innovation. The scope of IP rights has significant ramifications for New Economy industries. If IP rights are too narrow then firms may not be willing to make necessary—and often expensive—investments in research and development. If IP rights are too broad, then future innovation may be choked off by fear of frivolous infringement litigation. In establishing patent and copyright protection, the founders realized that inventors must benefit from their own creation. However, they did this from a utilitarian standpoint in which to promote “the Progress of Science and useful Arts” in society.¹⁰ IP rights that are interpreted too broadly stifle innovation, putting more wealth in the hands of copyright and patent holders at the cost of decreasing future innovation. From an economic standpoint, efficiency is achieved when there is adequate incentive for private firms to bear the cost of innovation, while at the same time not suppressing future competition and innovation. As William F. Baxter famously phrased it, “[i]nnovative activity should be subsidized as much and no more than is necessary to attract to that activity those inputs which, if invested in another activity, would yield a product of lesser social value.”¹¹

When functioning ideally, antitrust and IP law have served as well-functioning foils to one another. Antitrust law should recognize the legitimate scope of IP rights, while checking the potential for anticompetitive overextension of these rights. The natural tension between these two sets of laws generated a series of Supreme Court decisions. These decisions generally supported the longstanding legal principal that the core economic policy of the United States was to promote healthy competition. Any laws that might contribute to the development of market power should be interpreted narrowly so not to unduly curtail competition.¹² Traditional antitrust policy prevents owners of IP rights from extending their limited monopolies to other products unless the extension was necessary to protect their IP right against infringement or when the nature of the innovation is to displace two distinct products with an indivisible integrated product that performs both functions.¹³ Both *Image Technical Services v. Eastman Kodak* (9th Cir. 1990) and *U.S. v. Microsoft* (D.D.C. 1999) upheld this tradition. However, other recent cases have set a distinct trend by the courts aimed at strengthening IP law relative to antitrust law. A dangerous precedent was set by *Independent Services Organizations* (Fed. Cir. 2000) where the Court upheld Xerox and Kodak’s exclusive right to its patented parts and copyrighted product manuals, and in exercising this right could exclude anyone from purchasing them, including companies that sought to compete in the service market. This led to the dismissal of many other antitrust claims, and weakened

¹⁰ Article I, Section 8, clause 8 of the United State Constitution establishes the framework for IP protection by stating, “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

¹¹ See Wiliam F. Baxter, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 Yale L.J. 267, 268 (1966).

¹² See Linda R. Cohen and Roger G. Noll, *Intellectual Property, Antitrust and the New Economy*, 62 U. Pitt. L. Rev. 453 (2000-2001). The authors cite the antitrust cases against Bell and Microsoft, as well as the Sony Betamax case as examples of the courts protecting competition in the face of antitrust law.

¹³ See *id.* at 469.

the doctrine against leveraging an IP monopoly into other markets. No compelling economic evidence has been presented to explain this shift in recent jurisprudence.

However, we do not recommend a return to the economically illiterate IP/antitrust policies of the early 20th century. Economics suggest that the courts and agencies must seek a balance between the benefits of providing incentives to innovators and the social costs associated with even limited monopolies.¹⁴ When IP rights are too all encompassing, they go beyond the socially efficient point required to promote innovation and serve to redistribute wealth to patent and copyright holders at the expense of consumers.¹⁵ The very purpose of the 1909 Copyright Act was not to create copyright protection “primarily for the benefit of the author, but primarily for the benefit of the public.”¹⁶ There is a need for enforcement agencies to stand firm in the face of asserted IP rights. According to the *IP Guidelines* themselves, intellectual property is comparable to any other form of property, no more immune from antitrust law than a railroad, airplane, television or aluminum plant. In and of itself, IP holders should not receive special exemptions from antitrust scrutiny.

Because IP law plays such a crucial role in the New Economy, we applaud the Commission’s efforts to investigate how to correctly balance antitrust law in the face of IP concerns. Most New Economy industries can be defined as participating in “innovation markets.” As noted earlier, these markets have unique attributes that differentiate them from traditional “brick-and-mortar” industries. New Economy proponents calling for more lenient antitrust laws pertaining to high-tech markets often argue that these unique features make traditional antitrust laws outdated. They claim that high-tech fields are so dynamic that any cartel or market power will be short-lived, and government regulation will be prone to make more mistakes than a market left to its own devices. Furthermore, they claim that the strengthening of antitrust law relative to IP protection will erode incentives to innovate. On the surface, these claims appear to have some validity. However, upon examination, they provide, at best, a weak argument in favor of scrapping current antitrust laws as they pertain to New Economy issues. As discussed earlier, in some cases the uniqueness of New Economy markets call for more vigorous antitrust enforcement to ensure competition and continued innovation.

New Economy markets are indeed dynamic and innovation driven. However, this does not mean that well-tested antitrust policies should be abandoned as a result. Although there may be truth to the claim that it takes far less investment in tangible capital to enter many high-tech markets, significant barriers to entry still remain. The current IP regime can create almost insurmountable entry barriers for start-up companies without significant financial backing. The FTC noted in its report *To Promote Innovation*, the current IP system taxes entry into innovation markets because even “a

¹⁴ Joseph Stiglitz, FTC Testimony on Global and Innovation-Based Competition, <<http://www.ftc.gov/opp/global/GC101295.htm>>

¹⁵ *Id.*

¹⁶ H.R. REP. NO. 2222, 60th Cong., 2d Sess. (Report on the Copyright Act of 1909).

meritless claim” of infringement can scare away venture capital funding.¹⁷ The uncertainty cost posed by potential litigation can be ruinously expensive for small businesses—\$500,000 a case or more.¹⁸ As John R. Thomas, an associate Law Professor at George Washington University, recently noted in a joint FTC/DOJ hearing on antitrust and patents:

[The current IP regime] is said to increase industry concentration. It creates barriers to entry. The patent system is best played by the wealthy. It's best played by larger companies because it's a specialized regime that involves a lot of expertise. And so this expertise often doesn't come cheap and that means that a large number of firms in established industries often have massive patent portfolios built up, massive property estates, suites of evergreen patents. And it's hard for newcomers to come in and get that edge.¹⁹

As a result, new innovators in high-tech fields are often forced to focus on smaller niche markets where entrenched firms with significant market power and numerous patents have not yet ventured. Still, entrenched firms with significant market power in related fields can often bring their considerable resources to bear on these new niche markets by leveraging their dominant position and using it to significantly harm smaller competitors.

This example illustrates the problem of monopoly leveraging in high-tech markets. This occurs when a company uses its legally granted IP protection over a specific innovation or application in one market to gain an unfair competitive advantage in related markets. A common anticompetitive practice undertaken by firms with significant market power to exert their influence in a related market (such as the Operating System-Applications market) is to alter the format of their dominant product to make it less functional with other companies' fringe products and more functional with the dominant firm's fringe products.²⁰ If the underlying changes are undertaken for substantially anticompetitive purposes (without *valid business justification*²¹), then this action should be seen as a misuse of a firm's legitimate market power. Also, attempts to leverage market power by tying the purchase of one product over which a firm controls significant market power to another product in a related market at the expense of non-vertically integrated competitors should be treated as a substantial threat to a well-functioning, competitive marketplace. According to the Federal Circuit in *Atari*:

When a patent owner uses his patent rights not only as a shield to protect his invention, but as a sword to eviscerate competition unfairly, that owner may be found to have abused the grant and may become liable for antitrust violations when sufficient power in the relevant market is present.²²

¹⁷ FTC, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy*, (Oct. 2003).

¹⁸ See *Open Source and Industry Alliance*, Software Patents, Open Source and the Need for Reform, available at <<http://www.osaia.org/>>

¹⁹ FTC/DOJ hearing, *Patent Law for Antitrust Lawyers*, (2/8/2002), available at <<http://www.ftc.gov/opp/intellect/detailsandparticipants.htm#February%2008>>

²⁰ In this instance, “fringe products” can be defined as products or applications that rely on another product or set of products or applications in order to function.

²¹ “In general, a business justification is valid if it relates directly or indirectly to the enhancement of consumer welfare.” *Data Gen. Corp. v. Grumman Sys. Support Corp.*, 36 F.3d 1147, 1183 (1st Cir. 1994).

²² *Atari Games Corp. v. Nintendo of America, Inc.*, 897 F.2d 1572, 1576-77 (Fed. Cir. 1990).

Because of the layered structure of many industries that make up the New Economy where new markets build on top of previous markets and products, it is desirable that antitrust policy be crafted in a way to preserve competition at the different layers. Therefore, it is important not to let patent holders extend their IP protection farther than what is necessary to induce innovation. Furthermore, innovation can best be achieved at different layers by having several different competitors designing products or applications building upon existing technologies.

The alarming recent expansion of the patent system poses a significant threat to competition and further exacerbates antitrust concerns in New Economy markets. Patent reform must occur concurrent with any antitrust reform in order to achieve economically and socially efficient ends. “The lowering of legal standards and the pro-applicant posture of the PTO has encouraged a cottage industry—not of products or great inventions, but patents themselves.”²³ The large volume of low-quality, uninventive patents has served as deterrent to competition in markets that should not be fenced off by patent protection. “The greatest danger is from questionable patents that are asserted in notice letters, especially when they are asserted against smaller entities that are less able to bear the costs of defending against patents.”²⁴ Even improperly issued patents can have a significant negative effect on competition, especially for smaller companies without the resources to challenge larger competitors. In the area of software markets, the patent system presents possibly its greatest threat to competition. Because of the complexity of computer code, software patents are often granted for obvious and inconsequential “innovations.” The patentability requirements that innovations be both novel and non-obvious “are grounded in the notion that concepts within the public grasp, or are so obvious that they readily could be, are the tools of creation available to all.”²⁵ By giving IP protection to concepts that should be open to all current and potential future competitors puts severe limits on competition and innovation in up-and-coming New Economy markets. Patents only serve to promote innovation and future competitiveness when they are issued to truly novel or imaginative products or ideas. If reform does not occur, then the future will likely be dim for innovation in New Economy markets. If the United States wants to maintain its current competitive advantages in “innovation markets,” changes need to be made.

Antitrust and patent laws are inextricably bound and inevitably conflicting with one another because they take seemingly opposite, yet necessary, paths to accomplishing the same goals. When functioning efficiently “patent law contains provisions that accommodate antitrust law so that they frequently fit together like a puzzle.”²⁶ Ideally, these two related bodies of law should function synergistically in a manner whose end

²³ Statement of the Computer and Communications Industry Association before the House Subcommittee on Courts, the Internet and Intellectual Property on the Reform of the Nation’s Patent System.

²⁴ *Id.*

²⁵ *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 156 (1989). See the FTC Report: *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy*. (Oct. 2003).

²⁶ See generally David A. Schneider, *Licensed to Kill: The Battle Between Patent and Antitrust in Monopoly Leveraging Cases*, 20 *Hastings Comm. And Ent. L.J.* 857 (1997-1998).

goal serves to protect consumers and encourage innovation. The Supreme Court noted that the Patent Clause of the Constitution “reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the ‘Progress of Science and useful Arts.’”²⁷ When patent law begins to dominate antitrust law, this balanced system precariously tips from protecting consumers and innovation towards padding the pockets of existing rights’ holders. Government regulation can serve to plug the holes created by such market failures. The goal of any such regulation should be to protect consumers and innovation. If ideally implemented, government regulation should allow all competitors—large or small—to compete on the quality of their products and ideas and not the size and expertise of their legal departments.

Standards Development and Activities

Standards play a far more important role in technology industries than in most markets, yet with rare exceptions antitrust law and enforcement have not developed clear or effective rules for isolating anticompetitive aspects of standards development and implementation from the efficiency-enhancing effects of standards. For instance, the FTC’s consent decree with *Dell Computer* (1995), which enforced Dell’s failure to disclose “blocking” IP in standards-development process by precluding patent infringement actions, protects against fraud in standards setting, but provides no constraint against substantive misuse of standards by firms with market power in network effects markets.

Indeed, from a broader perspective, the *Dell* rule – and the corollary requirement of most standards-developing organizations (“SDOs”) that IP holders, license-protected technology required to implement a standard on fair, reasonable and non-discriminatory terms – is insufficient to ensure procompetitive use of standards in technology markets. The approach of antitrust courts to standards has likewise focused almost entirely on process (*Allied Tube*)—an oxymoron in light of the *Northwest Wholesale Stationers* rule that no amount of procedural due process can justify a facially anticompetitive practice (there a group boycott). The disinclination of courts to pass on the competitive merits of standards themselves should be re-examined, as much innovation competition occurs between rival standards.

Balancing interoperability achieved through voluntary, industry consensus standards (e.g., DVD, USB, FireWire, etc.) against the benefit of standards competition is difficult. But CCIA believes that antitrust law should not presume (1) that all industry standards efforts are necessarily procompetitive, or (2) that given increasing reliance on patents and IP, voluntary standards are in fact “open” standards. The history of high-tech standards (regardless of the merits of recent standards-related lawsuits such as that initiated by Broadcom against Qualcomm) suggests cogently that there is an exceptionally high potential for abuse of standards-setting organizations and the use of market power to “pollute” standards for exclusionary purposes, as in Microsoft’s unlawful actions against Java. Such practices are substantively inefficient and welfare-

²⁷ *Bonito Boats*, 489 U.S. at 146.

reducing conduct that should be deemed illegal in light of the central role of standards in the New Economy.

Tying and Bundling

Attacking bundled products on antitrust grounds in a New Economy requires a clear understanding of how market power is properly measured in dynamic industries. Yet as explained above, historical market power analysis remains as germane to dynamic industries as to classic commodities, save for the need to give due weight to the economic consequences of network effects and tipping.

Presuming market power in every patent or copyright is therefore unnecessary. The explosion in the number of patents – resulting in a proportional decrease in the amount of PTO attention granted to any application – renders such a presumption quite dangerous to procompetitive growth in innovation-driven markets. Just as IP rights must not be used by their holders as swords, nor should they become swords for enforcement agencies. This restraint is especially warranted where only a single patent or copyright is being protected. Rather, market power should continue to be measured – and not presumed – in terms of the market share of the tied products, with perhaps a thumb on the scale to account for the power of network effects.

The true challenge of bundled products lies in defining the product. In contrast to brick-and-mortar physical plant and commodities, New Economy products (computer code) are far more malleable and more easily combined without detection. In addition, these products may more easily spawn arguments (as was the case in *Microsoft*) that bundling is a technological necessity, or at the least is technologically dangerous to dismantle. Yet any relaxing in bundling/tying analysis based on such arguments would severely hinder the ability of agencies and courts to identify and sanction attempts at anticompetitive tying.

However, we recognize that many product-feature combinations are efficiency enhancing, especially in the absence of market power. The threat of product bundling lies of course in its ability to leverage established market power into adjacent markets, that is, the market for the tied product. In innovation-driven industries, antitrust enforcement must be especially stringent in punishing leveraging, because a smaller degree of success can nonetheless have a significant and lasting effect on competition.

As such, modern antitrust should not demand that bundling or tying in the New Economy must rise to the level of adjacent-market monopolization in order to warrant intervention. The economic force of network effects might make a tie successful at much lower penetration rates than what a viable monopolization claim requires. Hence the Chicago school skepticism of the anticompetitive effects of product bundling, typified in

Berkey Photo,²⁸ would be a dangerous course to take in antitrust enforcement of New Economy industries.

Security Ramifications of New Economy Antitrust Policy

One ramification of competition policy in high-tech sectors that gets little attention is its security implications. Far from being a tangential concern, antitrust policy is highly entwined with network security. A 2003 report by several leading network security experts and computer science professors concluded that the government “must confront the security effects of monopoly and acknowledge that competition policy is entangled with security policy from this point forward.”²⁹ More recent academic literature has touted the benefit of software diversity as well.³⁰ Much like in agriculture, a “monoculture” in the operating systems and desktop applications markets allows viruses, worms, Trojan horses, and other malicious intruders to spread with possible catastrophic consequences. As computers become cheaper and more integral to the average person’s daily life, more and more “ordinary consumers and non-technical personnel” enter the interconnected network of computer users.³¹ As a result, the computer infrastructure becomes increasingly more vulnerable over time. What makes this even more alarming is that this increased susceptibility does not escalate proportionally with the number of users. Because of the very fundamental nature of networks, each additional user causes the overall risk to increase exponentially.³² Each new user has the theoretical ability to interact with virtually anyone else within the IT infrastructure—whether knowingly and unknowingly. Ironically, the very same functionality that makes networked computers so valuable also proves to be the system’s “Achilles’ heel.” In 2003 alone, economic damage from worms and viruses was estimated to be well over \$100 billion.³³ Recently, we have witnessed attacks that have been substantially costly to society as a whole—the NIMDA and the SoBig viruses, to name a few—but they have received little press and proven to be little more than a minor inconvenience to the average American. However, it is highly likely—especially if risk-mitigating measures are not taken—that the future could hold a much more devastating attack in store. Genuine national security concerns are at stake when attacks are directed against indispensable targets, such as government or military computers, 911 and

²⁸ *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263 (2d Cir. 1979) (introduction of new camera requiring different film supplied only by Kodak did not constitute attempted monopolization).

²⁹ Dan Geer et al., *CyberInsecurity: The Cost of Monopoly*, 5 (Sept 24, 2003).

³⁰ Chen et al., *Software Diversity for Information Security*, <infoecon.net/workshop/pdf/47.pdf>; Rainer Bohme, *Cyber-Insurance Revisited*, <infoecon.net/workshop/pdf/15.pdf>.

³¹ See Geer, *supra* note 29, at 9. Geer et al. term this phenomenon the “cascade effect” because these intruders can spread from one system to another at extremely fast rates.

³² See *id.* at 7-9. Although Geer, et al, recognize that this effect cannot be exactly quantified, they offer two methods for approximating the added vulnerability created by each additional user. For two-way interactive communication (e.g., e-mail) the vulnerability rises by a factor of N^2 (“Metcalfe’s Law”). When people communicate in groups (e.g., web pages, electronic mailing lists, etc.) so that any random grouping of users can communicate with each other, the vulnerability of networks rises 2^N (“Reed’s Law”). The authors state that the true effect of network interconnectivity lies in between these two calculations.

³³ David Zeiler, “Government Issue,” *The Baltimore Sun/SunSpot.net*. (Sept. 18, 2003).

emergency response networks, or the computer systems facilitating the major financial and commodity exchanges. It would be imprudent to wait until a crisis before we take steps to remedy this problem.

Another potential concern in innovation-driven markets is that monopolies, and the market power they confer on a firm, create inefficiencies in the research and development market.³⁴ Firms are not motivated to aggressively innovate without the presence of meaningful competition. When this concept is applied to network security, it indicates that without competitive pressures firms exhibiting significant market power will not efficiently invest in security innovation. Even a perfectly informed consumer would have difficulty switching because the “lock-in” effect created by positive network externalities is so great. Coupled with the fact that the average computer user does not possess the technical aptitude—or even the desire to gain the technical aptitude—required to know his full risk exposure. In fact, if a monopolist were to invest in the amount of security innovation that would be efficient under competitive conditions, its profits would decrease. Antitrust regulation—or even the threat of it—helps keep a firm’s profit motives closer to the social optimal level of output in both the innovation and product markets.

This problem is not exclusively germane to the software industry. Competition and diversity can help promote security in the telecommunications arena as well. The incredible similarities shared by the Internet and telecom industries make them both susceptible to many of the same vulnerabilities. The defining characteristic of the modern telecom industry is that it relies on a network of linked computers with terminals, which like traditional computer networks are vulnerable to deliberate attack.³⁵ Aside from the concerns voiced in the previous paragraph that can be applied to the software used to coordinate the telecom industry, it is also vulnerable to physical security risks due to the hardware involved—switching and routing equipment—which are usually located in close physical proximity and run by the same company or small group of companies. The massive telecommunications failures in New York City after the September 11 attacks were a debilitating example of this problem. The subsequent stock market shut down, which lasted six days, was directly related to the telecommunications system failure. Antitrust regulation is important to prevent further market concentration, and enforcement should possibly be strengthened in industries judged to be vital to our security infrastructure. Ensuring competition in the telecom industry is one way to encourage a decentralized base, which is much less vulnerable to full system failure.

We recognize that antitrust policy alone will not solve these problems; it is merely a part of the overall solution—a significant part nonetheless. Maintaining policies aimed at preserving competition in the network-oriented industries acts to mitigate risk by limiting the scope of the damage. Furthermore, it can function as a disincentive to those aimed at causing harm to the nation’s computer infrastructure by limiting the possible “success” a malicious software program could have.

³⁴ See Gilbert and Sunshine, *supra* note 2, at 78.

³⁵ See John C. Wohlstetter, *The Vulnerability of Networks*, Regulation at 24, 4 (Winter 2001).

Recommendations

- 1) Statutory guidelines limiting the application of traditional antitrust doctrine to New Economy markets would be ill advised given the relatively little knowledge available on antitrust and its application to the New Economy. The goal should be to develop a more nuanced model of competition in cutting-edge markets, which would provide the framework for a more efficient treatment of antitrust in innovation-driven markets.
 - Premature action to limit the enforcement agencies ability to prevent the abuse of market power in New Economy industries would be imprudent. This is especially true in markets that exhibit profound demand-side economies of scale and therefore are prone to “tipping” because once achieved the barriers to entry make it very hard to reverse.
 - Only place where special guidance, and perhaps slightly different rules, are needed is in regards to monopoly leveraging and standards development, both of which are more important to, and potentially more destructive of, competition in high-tech markets than otherwise
- 2) Antitrust agencies and the courts should give greater consideration to the demand-side characteristics of New Economy markets because of the significant effect they have on determining a companies competitive significance, especially when substantial “network effects” exist.
- 3) Where IP and antitrust concerns overlap, antitrust authorities should take a more active role in the formation of IP policy. As suggested by the 1996 FTC report on competition policy in high-tech markets, it is appropriate for antitrust enforcers to contribute to sound policy with respect to IP rights because inappropriate grants of IP interfere with the competition that often drives innovation, which is not only at odds with antitrust law but also with the very purpose of IP law itself. This is particularly the case in networked technologies, where overbroad IP protection could frustrate interoperability between competitive and innovative products.
 - Specifically, the DOJ should file pro-competition amicus briefs in cases where IP and antitrust overlap, such as cases involving the application of Section 1201 of the Digital Millennium Copyright Act, to prevent interoperability and competition;
 - Become more active in the development of Administration positions concerning IP legislation that affect interoperability and competition;
 - Become part of U.S. delegations to international negotiations concerning IP-related topics that could implicate interoperability. Over the past decade, the Patent and Trademark Office has seized control of the IP policy process in the

Administration, thereby elevating the interests of rights' holders over those of competitors and the public at large. This imbalance should be redressed.

- 4) The antitrust enforcement agencies should closely monitor the activities of standards organizations, to ensure that they are not used in a manner that frustrates competition.
- 5) Increase the technical expertise of the DOJ/FTC antitrust staff (either through more funding, or more realistically, by redistributing appropriations in order to more accurately reflect the needs of the New Economy). Furthermore, standards for selecting judges should be altered in order to give greater consideration to judges with the requisite experience and training required to decide some of the more complex questions posed by New Economy concerns.
- 6) The Commission should investigate methods to expedite antitrust enforcement and litigation in order for it to be more effective given the rapid innovation characteristic of many New Economy markets.
 - Currently, companies with significant monetary and legal resources can delay the enforcement process long enough to capture significant market power. As a result, the ability to resurrect a competitive market largely disappears.

Conclusion

CCIA was established nearly three decades ago to promote competitive, fair and open high-tech markets. We strongly believe that a continued commitment to these values is crucial to guarantee vibrant growth in the New Economy industries. Antitrust law and regulation has been essential to this nation's high rate of economic growth and has served as a catalyst solidifying the United States as the world leader in innovation throughout the last century. The future economy will almost certainly hinge on dynamic, innovation-driven, and network-oriented competition. While these attributes mean that antitrust doctrine must be modernized to accommodate these new concerns, to abandon these established and well-tested principles in what is arguably the most crucial sector to the future economic health of the country has the potential to be catastrophic and irreversible.