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**All's Fair in Love and... Standard-Setting - The Third Circuit Says No to Deception and Yes to Antitrust Actions in Broadcom Corp. v. Qualcomm, Inc.**

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ALL'S FAIR IN LOVE AND . . . STANDARD-SETTING?! THE THIRD CIRCUIT SAYS “NO” TO DECEPTION AND “YES” TO ANTITRUST ACTIONS IN BROADCOM CORP. v. QUALCOMM, INC.

I. INTRODUCTION

Imagine that you could not use your Bose noise canceling headphones with your Apple iPod.1 Or that you could not connect the Panasonic DVD player you have had for years to your brand new LG flat-screen television.2 Or that you could only make calls to people on your telephone network.3 These notions are barely fathomable in today’s globally interconnected world, but this is what every day would be like without technical standards and the organizations that set them.4

The increasing need for and importance of standards and standard-setting organizations (SSOs)—particularly in high technology industries—presents established antitrust jurisprudence with new and difficult challenges.5 This is especially true when companies involved in the standard-setting process also own the intellectual property rights (IPRs) of technology included in the standard.6 Since the emergence of SSOs, antitrust jurisprudence and SSOs have coexisted somewhat uncomfortably because


2. See id. (noting use of standards to ensure compatibility between new and old products).

3. See id. (explaining use of standards to enable rival products to work together).

4. For a discussion of standards, standard-setting organizations (SSOs) and their benefits, see infra notes 28-39 and accompanying text.

5. See James J. Anton & Dennis A. Yao, Standard-Setting Consortia, Antitrust, and High-Technology Industries, 64 ANTITRUST L.J. 247, 247 (1995) (highlighting importance of standards and SSOs to information technology and telecommunications industries); Phillip J. Weiser, Standardizing the Law of Antitrust Oversight of Standard Setting in a Global Economy, Globalization Comes Home, Conference 1 (Feb. 1, 2007) (manuscript at 1, on file with author) [hereinafter Weiser, Standardizing the Law] (hypothesizing that globalization has created challenges for antitrust enforcement and that SSOs are “mindful of and greatly affected by antitrust oversight”). For a discussion of the emergence of standards and SSOs, see infra notes 28-33 and accompanying text.

6. Cf. Weiser, Standardizing the Law, supra note 5 (manuscript at 4) (describing importance of patented technologies in standards as force raising profile of standard-setting).

(717)
courts are unsure how to fully enforce existing laws without impinging on the important functions those standards and SSOs serve.  

In recent years, antitrust claims have been brought successfully against companies engaged in deceptive conduct toward SSOs regarding the status of the companies’ IPRs. In *Broadcom Corp. v. Qualcomm, Inc.*, the Third Circuit, building on existing federal precedent, tackled a new, though related, issue. In *Broadcom*, the Third Circuit held that (1) if a patent holder falsely promises in the consensus-driven environment of an SSO that it will license its proprietary technology on fair, reasonable and non-discriminatory (FRAND) terms, (2) the SSO then relies on that promise when including that firm’s technology in the standard and (3) the patent holder subsequently breaches that promise, then that patent holder’s breached promise is anticompetitive conduct upon which a claim can be based. With its holding, the Third Circuit logically extended existing precedent established mainly by the Federal Trade Commission (FTC). In so doing, the court emphasized that the focus in antitrust cases involving SSOs should be on the actual process of standard-setting, rather than on the effects of those standards once set. In taking on companies’


Despite initial reluctance to support standards, commentators note that antitrust law is “developing a more hospitable attitude toward cooperation among competitors necessary to facilitate new standards.” See Weiser, Standardizing the Law, supra note 5 (manuscript at 5) (discussing changing attitude of antitrust community toward standard-setting); see also Anton & Yao, supra note 5, at 248-29 (connecting favorable attitude of antitrust community and courts toward standards to general consensus over procompetitive benefits of standards); Weiser, Making the World Safe, supra note 1 (manuscript at 11) (suggesting that over time courts have recognized that standard-setting has benefits); Masoudi Address, supra (recognizing trend in thinking that antitrust laws must complement standards-setting policies).

8. For a discussion of federal precedent in antitrust law, see infra notes 55-80 and accompanying text.

9. 501 F.3d 297 (3d Cir. 2007).

10. For a discussion of the facts and claims made in *Broadcom*, see infra notes 81-93 and accompanying text.

11. See *Broadcom*, 501 F.3d at 314 (explaining that deception of SSOs harms competitive process by “obscuring the costs of including proprietary technology in a standard and increasing the likelihood that patent rights will confer monopoly power on the patent holder”).

12. See id. at 314 (claiming that holding builds on “established principles of antitrust law” and represents “emerging view” of enforcement authorities and commentators). For a discussion of antitrust actions by the FTC, see infra notes 55-80 and accompanying text.

promises to license technology on FRAND terms, however, the Third Circuit introduced a problematic new area of what is now known as "standard-setting jurisprudence."

This Casebrief discusses the growing area of law dealing with deception in the standard-setting process as a basis for antitrust claims, and serves as a guide to practitioners facing these and similar issues. Section II discusses the general requirements of a claim under Section 2 of the Sherman Act. It will also discuss the procompetitive benefits derived from SSOs and the anticompetitive risks associated with them—most importantly the threats posed by "patent hold-up." Section III focuses on the facts and claims of Broadcom and the district court’s and Third Circuit’s analysis. Section IV critically analyzes the decision and argues that Broadcom properly follows and extends existing federal precedent and correctly focuses the analysis of antitrust claims on the standard-setting process. Section V concludes by discussing ambiguities arising out of the Third Circuit’s decision.

II. DEVELOPMENTS IN ANTITRUST JURISPRUDENCE LEADING UP TO BROADCOM

A. The Sherman Act Section 2

Signed into law in 1890, the Sherman Act prohibits monopolization and attempts to monopolize, as well as contracts, combinations and conspiracies in restraint of trade. Building on "old and well-recognized principles of the common law," the Sherman Act was intended to promote

ID=1186 (last visited Feb. 20, 2008) (highlighting difference in focus by district court and Third Circuit).


15. For a discussion of Section 2 of the Sherman Act, see infra notes 20-27 and accompanying text.

16. For a discussion of the procompetitive and anticompetitive effects of SSOs and the problem of patent hold-up, see infra notes 34-80 and accompanying text.

17. For a discussion of the facts and analysis made in Broadcom, see infra notes 81-108 and accompanying text.

18. For a critical analysis of Broadcom, see infra notes 105-27 and accompanying text.

19. For a discussion of the potential problems after Broadcom, see infra notes 134-41 and accompanying text.

20. See 15 U.S.C. §§ 1, 2 (2007). This Casebrief is concerned with Section 2, which condemns monopolization and conspiracies to monopolize:

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding $100,000,000 if a corporation, or,
competition and, in turn, consumer welfare. The broad language used in the Sherman Act left courts to their own devices to interpret and enforce its goals, thus creating a wide ranging, and—until recent decades—often changing antitrust jurisprudence.

If any other person, $1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court. Id. § 2 (proscribing certain conduct).

It is important to note that the Sherman Act does not prohibit monopolies themselves, only monopolization and attempts to monopolize. See id. (defining prohibited conduct). The distinction may not seem like much, but courts in early cases spent considerable amounts of time discussing it. See, e.g., Standard Oil Co. of N.J. v. United States, 221 U.S. 1, 62 (1911) (finding that Sherman Act contains “omission of any direct prohibition against monopoly in the concrete,” and concluding that some bad purpose is required for finding of monopolization); United States v. Am. Tobacco Co., 221 U.S. 106, 182 (1911) (requiring showing of intention to use power to further monopolize industry); United States v. Aluminum Co. of Am., 148 F.2d 416, 429 (2d Cir. 1945) (“It does not follow because [defendant] had such a monopoly, that it ‘monopolized’ the . . . market: it may not have achieved monopoly; monopoly may have been thrust upon it.”); United States v. Am. Can Co., 230 F. 859, 901 (D. Md. 1916) (concluding that size and power alone do not amount to violation of Sherman Act). Today, there is a strong consensus that monopoly, without more, does not establish monopolization under the Sherman Act. See Phillip Areeda et al., Antitrust Analysis 368 (6th ed. 2004) (adding that monopolization requires some type of exclusionary conduct, which is still ripe for debate and litigation).

21. Areeda et al., supra note 20, at 36 (quoting Senator Sherman, 21 Cong. Rec. 2456 (1890)); cf. Am. Soc’y of Mech. Eng’rs, Inc. v. Hydrolevel Corp., 456 U.S. 556, 568 n.6 (1982) (distinguishing between looking to common law for guidance and permitting common law to define limits of antitrust laws); Standard Oil, 221 U.S. at 51 (proclaiming that Sherman Act’s terms “at least in their rudimentary meaning” originated in common law); Areeda et al., supra note 20, at 32-34 (surveying how common law addressed competition through restrictions on middlemen offenses, monopoly, restraints of trade, conspiracy and corporate combinations); see also Broadcom Corp. v. Qualcomm, Inc., 501 F.3d 297, 308 (3d Cir. 2007) (citing LePage’s Inc. v. 3m, 324 F.3d 141, 169 (3d Cir. 2003)); Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law: An Analysis of Antitrust Principles and Their Application ¶ 100a (2006) (stating that primary goal of antitrust law is to maximize consumer welfare by promoting competition among firms); Patrick D. Curran, Comment, Standard-Setting Organizations: Patents, Price Fixing, and Per Se Legality, 70 U. Chi. L. Rev. 983, 996 (2003) (suggesting that traditional focus of antitrust policies has been on maximizing consumer welfare).

Consumer welfare is measured by consumer surplus—the difference between what a consumer pays and what a consumer is willing to pay—and producer surplus—the difference between the price at which the producer sells and the lowest price at which the producer is willing to sell. See id. at 996 (adding that consumer welfare is concerned with “overall allocative efficiency,” meaning that no distinction is made between benefits to producers or consumers). Monopolies reduce the quantity of a product in the market and increase its price, which reduces consumer surplus more than it increases producer surplus, creating a “deadweight loss” and reducing “allocative efficiency.” See id. (concluding that antitrust laws focus on reducing monopoly prices, increasing output and restoring market equilibrium).

22. See Broadcom, 501 F.3d at 306 (terming Section 2’s language “sweeping”). Compare United States v. Trans-Missouri Freight Ass’n, 166 U.S. 290, 312 (1897) (finding that “every contract, combination . . . or conspiracy . . . that is in restraint of trade or commerce is, by the strict language of the act, prohibited”), with Stan-
dard Oil, 221 U.S. at 62 (announcing rule of reason test to determine whether contracts in restraint of trade violate Section 1 of Sherman Act), and United States v. Addyston Pipe & Steel Co., 85 F. 271, 280-82 (6th Cir. 1898) (declaring that contracts are not illegal under Section 1 of Sherman Act as long as restraint of trade is "merely ancillary" to main purpose), aff'd, 175 U.S. 211 (1899); compare Kiefer-Stewart Co. v. Joseph E. Seagram & Sons, Inc., 340 U.S. 211, 212-13 (1951) (finding that two wholly owned subsidiaries' joint refusal to supply wholesaler declining to follow pricing scheme violated Section 1 of Sherman Act), and United States v. Yellow Cab Co., 332 U.S. 218, 227 (1947) (holding that vertically integrated enterprises are not "necessarily" outside authority of Sherman Act), with Copperweld Corp. v. Independence Tube Corp., 467 U.S. 752, 752 (1984) (concluding that parent is incapable of conspiring with wholly owned subsidiary under Section 1 of Sherman Act), Advanced Health-Care Serv. v. Radford, 910 F.2d 139, 145-46 (4th Cir. 1990) (holding that under Copperweld, wholly owned subsidiaries are precluded from antitrust liability under Section 1 of Sherman Act), and H.R.M. v. Tele-Comm., 653 F. Supp. 645, 647-48 (D. Colo. 1987) (finding two wholly owned subsidiaries incapable of conspiring with one another to monopolize under Sections 1 and 2 of Sherman Act); see also Areeda ET AL., supra note 20, at 43-45 (covering problems related to antitrust enforcement) (citing Robert Cushman, The Problem of the Independent Regulatory Commissions, in Report of United States President's Committee on Administrative Management in the Federal Government 205, 211 (1937)).

As noted previously, the focus of antitrust law is on improving consumer welfare. See, e.g., Broadcom, 501 F.3d at 308 (stating purpose of antitrust law). This was not a foregone conclusion, however, and the focus of antitrust cases has varied significantly over the years. Compare, e.g., Trans-Missouri, 166 U.S. at 323 ("Trade or commerce . . . may . . . be badly and unfortunately restrained by driving out of business the small dealers and worthy men whose lives have been spent therein, and who might be unable to readjust themselves to their altered surroundings.") (emphasis added), Chi. Board of Trade v. United States, 246 U.S. 231, 241 (1918) (upholding rule fixing price for certain sales between close of call and opening of new session under rule of reason inquiry as reasonable, in part because it protected small traders), and Fashion Originators' Guild of Am. v. Fed. Trade Comm'n, 312 U.S. 457, 467-68 (1941) (condemning group boycott as violative of Sherman Act and FTC Act, but citing language in Trans-Missouri regarding "small dealers and worthy men" favorably), with Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 690 n.6 (1978) (confining rule of reason inquiry to "consideration of impact on competitive conditions" and making obsolete previous arguments about whether arrangements were "socially preferable" because of "high fixed costs or risks of 'cut-throat' competition"), and Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 224-25 (1993) (emphasizing that competition that harms only competitors is not anticompetitive under Section 2 of Sherman Act); see also William E. Kovacic, The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix, 2007 COLUM. BUS. L. REV. 1, 17, 21-22 (2007) (commenting on "exceptionally expansive view of abuse" in decisions from 1940s through mid-1970s). The question of the focus of antitrust laws was all but settled in the 1980s with the arrival of the Chicago School, an economics-based analysis of antitrust focusing solely on efficiency. Cf. Michael S. Jacobs, An Essay on the Normative Foundations of Antitrust Economics, 74 N.C. L. REV. 219, 219, 227 (1995) (concluding that Chicago School approach to antitrust "reigned" in courts and agencies); Kovacic, supra, at 24-25 (recognizing "centrality" of Chicago School in modern U.S. antitrust policy); see also Curran, supra note 21, at 995 (noting Chicago School exerted strong influence on antitrust jurisprudence in recent years). The Chicago School, first coming to prominence in the late 1960s, contended that consumer welfare should "be the only object of inquiry" into anticompetitive behavior. See Jacobs, supra, at 220, 227 (summarizing emphasis of Chicago School). The work of Chicago School scholars replaced that of the
Modern liability under Section 2 of the Sherman Act requires both "the possession of monopoly power in the relevant market and . . . the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." Monopoly power can be proven through direct evidence of supracompetitive prices and reduced output, or it can be inferred from circumstantial evidence such as the structure of the relevant market. The willful acquisition or possession of monopoly power must also be accompanied with some anticompetitive conduct, which can take any number of forms, but includes competition on something "other than the merits." Courts, however, are quick to stress that conduct that merely harms competitors is not anticompetitive. To determine whether conduct is anticompetitive, courts must consider the conduct's impact on

then-dominant Harvard School, which was distrustful of large corporations and "concentrated industries," and with whom the Chicago School disagreed over both research methodology and policy conclusions. See id. at 228 (comparing Chicago School and Harvard School approaches).

23. United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966) (defining monopoly power as "the ability to control prices and exclude competition in a given market"); see also Ramon A. Klitzke, Patents and Monopolization: The Role of Patents under Section Two of the Sherman Act, 68 MARQ. L. REV. 557, 559 (1984) (commenting that power to fix prices or exclude or restrict competition need not be exercised for monopoly power to exist).

24. See United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (observing that to support inferences of monopoly power, plaintiffs must plead and prove that firm has dominant market share in relevant market and that high barriers to entry exist in that market). Barriers to entry prevent competitors from entering a market in response to monopoly prices, such as regulatory requirement, high capital costs or technological obstacles. See, e.g., id. (defining barriers to entry). To prove monopoly power through indirect evidence, the plaintiff must define the relevant market. See SmithKline Corp. v. Eli Lilly & Co., 575 F.2d 1056, 1062-63 (3d Cir. 1979) (outlining evidentiary requirements of Section 2 claim). Competing products are considered to be in the same market if they are "readily substitutable." See Brown Shoe Co. v. United States, 370 U.S. 294, 325 (1962) (stating that market boundaries are determined by interchangeability of use between substitutable products).

25. See 3M, 324 F.3d at 147 (explaining anticompetitive conduct) (citing Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 & n.32-33 (1985)). Aspen Skiing explained that "competition on something other than the merits" includes attempts to exclude rivals on some basis "other than efficiency." See id. at 605 & n.32-33 (citing ROBERT H. BORK, THE ANTITRUST PARADOX 138 (1978)) (clarifying anticompetitive conduct requirement of monopolization claim). One commentator has stated that "competition on the merits" requires that a monopolist's market power be due to "desirable products, low prices or both." See Areeda et al., supra note 20, at 393 (elucidating "competition on the merits" concept).

26. See Brown & Williamson Tobacco, 509 U.S. at 224-25 (concluding that antitrust laws protect competition, not competitors); cf. Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 458 (1993) (noting that law does not prohibit even severely competitive conduct, only conduct that "unfairly tends to destroy competition itself").

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consumers and whether the conduct impairs competition in an "unnecessarily restrictive way."\footnote{27} 

B. The Emergence of Standards-Setting Organizations

Standards and SSOs have become important, and sometimes indispensable, to many industries.\footnote{28} Their emergence, however, also raises significant and complex antitrust issues.\footnote{29} This is especially true when standards include patented technology.\footnote{30} Standards are "set[s] of technical specifications that provide[ ] a common design for some product or service, a common way of speaking, a common judge of good and bad performance."\footnote{27} See Aspen Skiing, 472 U.S. at 604-05, 605 n.32 (considering what constitutes anticompetitive conduct).

27. See Aspen Skiing, 472 U.S. at 604-05, 605 n.32 (considering what constitutes anticompetitive conduct).

28. See Development and Promulgation of Voluntary Consensus Standards Act, Pub. L. No. 108-237, Title 1, § 102, 118 Stat. 661 (2004) (finding that thousands of standards help national economy operate in "unified fashion"); see also Anton & Yao, supra note 5, at 247 (claiming that importance of standards and SSOs is particularly strong in information technology and telecommunications industries); Curran, supra note 21, at 983 (declaring SSOs to be "critical element" of modern economy); M. Sean Royall, Standard Setting and Exclusionary Conduct: The Role of Antitrust in Policing Unilateral Abuses of Standard-Setting Processes, ANTITRUST MAGAZINE, Spring 2004, at 44 ("[I]ndustry standards are pervasive throughout our economy and provide a powerful engine for change and progress in many markets."); Weiser, Standardizing the Law, supra note 5 (manuscript at 3) (suggesting that standards are "uniquely important" to facilitating success of new products and enabling global interoperability).

The first notable standard was developed for railroads during the American Civil War, and is credited with both helping the North win the war and promoting the success of the railroad industry. See Weiser, Standardizing the Law, supra note 5 (manuscript at 2) (asserting that success of railroad standard suggested importance of interoperability in industries).

29. See Farrell et al., supra note 14, at 603 (remarking that standard-setting involves horizontal competitors agreeing on specifications of products, which implicates antitrust issues over boundary between cooperation and collusion).

30. See Weiser, Making the World Safe, supra note 1 (manuscript at 8-9) (acknowledging importance and effects of patented technology on standards). Patents bestow legal monopolies upon their holders. See Klitzke, supra note 23, at 557 (suggesting that patents can be "powerful anticompetitive weapon[s]"). As such, the granting of patents is an exception to the Sherman Act that is often narrowly construed. See id. at 595 (commenting that patent statutes and Sherman Act stand in "polar opposition"). One commentator has noted the argument that patent rights have been broadened at the expense of antitrust laws. See Andrea Fisler Ventura, Comment, Mourning the Consumer Demand Test: Restoring the Proper Analysis to Antitrust Monopoly Leveraging Claims Against Patent Holders, 36 S.W. U. L. REV. 107, 114 (2007) [hereinafter Mourning the Consumer Demand Test] (highlighting criticisms of patent rights). Patent holders have the ability to exclude competitors from making, using or selling their technology. See Klitzke, supra note 23, at 570 (determining that patents confer greater power on holder than trademarks). Patent holders can also unilaterally determine licensing terms to those it allows to make, use or sell their technology. See id. at 566 (noting various different kinds of licensing schemes). Patents also tend to beget the improvement of existing products and the innovation of new ones, which often results in patent holders accumulating significant numbers of patents within their particular area. See id. at 582 (explaining phenomenon of "patent accumulation"). For example, Qualcomm holds over 7,200 patents and patent applications in CDMA and other technologies. See Qualcomm.com, Who We Are–Qualcomm History http://www.qualcomm.
process.” SSOs are private groups made up of various different market participants, many of whom are direct competitors; these participants collaborate in order to establish standards for all kinds of products and services. By the late 1980s, there were more than four hundred SSOs that had developed roughly thirty thousand standards, and because standard-setting requires specific expertise in specialized areas, new SSOs are continuously forming to meet the needs of “niche markets.”

1. **Procompetitive Benefits of Standard-Setting**

The process of setting standards holds many potential benefits for both producers and consumers. Most importantly, standards ensure that competing products are interoperable, meaning that consumers can “mix and match” products purchased from competing firms without worrying that they will not work together. Interoperability increases consumer welfare by promoting price competition between interoperable products, and also reduces consumers’ information costs associated with acquiring new products. Standards leading to interoperability can also increase the value of products for all consumers, creating a “demand-side economy,” which is a market where consumer demand increases as a product is used more in a network. Furthermore, standards provide a “base-

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31. See Herbert Hovenkamp, *Standards Ownership and Competition Policy*, 48 B.C. L. Rev. 87, 87 (2007) (defining standards); see also Curran, supra note 21, at 984-85 (discussing role of SSOs in establishing “uniform technical specifications for particular products and services”). There are different kinds of standards, such as quality and safety standards and interface standards. See Anton & Yao, supra note 5, at 247 (explaining most important types of standards). Quality and safety standards are used to define design elements or “performance characteristics” of a product that must be included to be sold in a given market or given “approval,” “certification” or “listing” by an SSO; conversely, interface standards define if and how products will communicate with or fit into other products. See id. (defining different types of standards).

32. See Development and Promulgation of Voluntary Consensus Standards Act § 102 (finding that standards are written by hundreds of SSOs in both public and private sectors, and that thousands of volunteers are involved); see also Curran, supra note 21, at 984 (defining SSOs).

33. See Curran, supra note 21, at 985 (commenting on growth of standard-setting).

34. See, e.g., Anton & Yao, supra note 5, at 248-49 (discussing benefits of standards and SSOs); Curran, supra note 21, at 985-90 (same); Royall, supra note 28, at 44 (same).

35. See Curran, supra note 21, at 986 (giving example that uniform standards for videotapes allow consumers to purchase Maxell tapes for use in Sony camcorders).

36. See id. (explaining benefits of interoperability); Anton & Yao, supra note 5, at 249 (providing “information diffusion to market participants” as one example of positive externalities on supply side of market caused by standards).

37. See Curran, supra note 21, at 986-88 (explaining network effects benefits of standards). For example, one commentator has explained that in telecommunications markets the benefit is due to “a direct physical effect”—as more people use...
line" for future research and development.38 This baseline reduces costs, waste and risks to producers in developing new and improved products, and further serves to promote competition through innovation.39

2. Possible Anticompetitive Effects of Standard-Setting

Despite their procompetitive benefits, standards and SSOs also present numerous potential anticompetitive risks and drawbacks.40 Standards can disadvantage groups of existing competitors by raising costs or excluding technologies of rivals without technical rationale.41 By choosing or influencing a standard, dominant firms can increase production costs for their competitors, forcing them to increase prices and reduce output.42 Other anticompetitive effects include the use of standards to exclude current rivals or to raise barriers to entry into a certain product market.43 There is a strong incentive for firms to try to influence standards.44 This is especially true when the standard requires the use of proprietary technology.45

One of the most prevalent anticompetitive problems associated with SSOs and standard-setting is what has come to be known as "patent hold-up."46 Patent hold-up is simultaneously a private problem for industry participants, a public policy issue and an antitrust concern.47 Patent hold-up is the network and it expands, communication becomes more valuable. See Anton & Yao, supra note 5, at 249 (providing examples of positive externalities derived from standards).

38. See, e.g., Curran, supra note 21, at 988 (theorizing that creating baselines means that innovating firms do not have to expend costs of creating initial product, but can rely on "functionality" of existing product and other related products).

39. See id. at 988-90 (discussing benefits of standards to innovation).

40. See Am. Soc'y of Mech. Eng'rs, Inc. v. Hydrolevel Corp., 456 U.S. 556, 570-71 (1982) (commenting on anticompetitive effects of SSOs); Anton & Yao, supra note 5, at 249-51 (highlighting various anticompetitive effects of standard-setting); Hovenkamp, supra note 31, at 90 (explaining that standards can "facilitate both of the evils that concern antitrust law—namely, collusion and exclusion"); Royall, supra note 28, at 44 (mentioning potential for standard-setting to "give way to anticompetitive agreements and jointly imposed market restraints").

41. See Anton & Yao, supra note 5, at 250 (discussing anticompetitive risks of standard-setting).

42. See id. (commenting on effects of influencing standards).

43. See id. (highlighting exclusionary risks of standards).

44. See id. (describing benefits to firms that influence standards).

45. See id. (discussing enhanced benefits to firms holding patents in technology included in standards). For further discussion of the interplay of patents and antitrust law, see supra note 30.

46. See Farrell et al., supra note 14, at 603-04 (introducing patent hold-up as problem with SSOs); Skitol, supra note 14, at 729-33 (discussing patent hold-up and connection with SSOs).

47. See Farrell et al., supra note 14, at 608-09 (describing multiple concerns over patent hold-up).

Privately, those who will implement the standard (notably manufacturers of standard-compliant equipment) do not want to be overcharged by pat-
up occurs when firms participating in the standard-setting process conceal the status of their IPRs until their proprietary technology is included and the standard is “locked in,” meaning that all members of the SSO must use the technology included in the standard. 48 Once a standard is locked in, the firm holding the IPRs can refuse to allow other firms to implement the standard without recognizing their exclusive rights and paying supracOMPetitive prices to use the technology—thereby “holding-up” the standard. 49 Patent hold-up is considered to be a serious problem because it can ultimately harm consumers even more than it can harm members of the industry. 50

SSOs take the threat of patent hold-up seriously. 51 Being consensus-oriented organizations, participants in SSOs rely on structural protections to facilitate competition and restrain monopoly power. 52 Most importantly, SSOs usually have rules in place that require disclosure of IPRs and the licensing of technology on FRAND terms. 53 Problems arise, however, holders. Nor do they want to be forced by concerns about hold-up to eschew the best technology just because it is patented, or to attempt difficult and perhaps inefficient ex ante negotiation. Both they and patent holders generally have an interest in limiting suspicion and vested interest in the standards process. But standards hold-up is also a public policy concern, because downstream consumers are harmed when excessive royalties are passed on to them. Downstream consumers also can be harmed when other burdensome terms are imposed in patent licenses and when cumulative innovation is retarded by patent hold-up. This is not merely a private contracting problem, but an antitrust problem. It concerns the inefficient acquisition of market power that harms consumers; more fundamentally, deceiving buyers or keeping them in the dark about the terms on which a technology will be available subverts the competitive process.

Id. (same).


49. See id. (arguing that industry participants have invested significant resources at this point and that switching to another standard would be prohibitively expensive).

50. See Farrell et al., supra note 14, at 644 (emphasizing effects of patent hold-up on consumers).

51. See, e.g., id. at 609 (noting that many SSOs have rules relevant to patent hold-up problem).

52. See Royall, supra note 28, at 44 (discussing collaboration in standard-setting); see also Weiser, Standardizing the Law, supra note 5 (manuscript at 4) (opining that SSOs maintain “quasi-idealistic mission that succeeds though group synergy” (quoting Evolutionary Pressures in Standardization: Hearing on the Role of Technical Standards in Today's Society and the Future Before the Subcomm. on Technology of the H. Comm. on Science, 106th Cong. 63 (2001))) (statement of Carl Cargill, Director of Standards, Sun Microsystems, Inc.), available at http://www.sun.com/software/standards/Testimony-Final-reformatted.pdf.

53. See, e.g., Farrell et al., supra note 14, at 624-43 (discussing rules promulgated by SSOs to prevent patent hold-up and related issues): Skitol, supra note 14, at 742-44 (commenting on obligation of SSOs to avoid abuses of their processes). The Supreme Court held that SSOs are liable for the anticompetitive harm caused as a result of their failure to implement procedures to prevent abuses of SSO
over how to enforce those rules and what action to take when they are broken.54


Although courts have consistently held that SSOs' activities are subject to antitrust scrutiny, there has been continuous concern about the effects of that scrutiny.55 The FTC has been an instrumental body in attempting to draw the line between the legitimate actions of corporations engaged in the standard-setting process and those manipulating the process to circumvent antitrust laws.56 In three landmark actions, the FTC processes in American Society of Mechanical Engineers v. Hydrolevel Corp., 456 U.S. 556 (1982). See Skitol, supra note 14, at 743 (noting that holding was affirmed in Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492 (1988)).

54. See Farrell et al., supra note 14, at 609 (examining difficulty of both creating and enforcing effective rules). These rules can be hard to fashion because stronger rules may be more effective at mitigating hold-up problems, but if the rules are too strong, patent holders may be discouraged from joining the SSO. See id. at 624 (calling rules "policy tradeoffs" for SSOs); cf. Curran, supra note 21, at 983 (hypothesizing that licensing obligations may be left purposely vague in order to avoid liability for price-fixing). SSOs do not do anything to check whether the certifications made by members as to the status of their IPRs or terms of licenses are accurate. Cf. Curran, supra note 21, at 991-92 (noting that "[p]atent owners need only promise to supply [FRAND] licenses"). Members of SSOs have to negotiate with patent holders individually because SSOs leave licensing terms vague by refusing to define FRAND terms, and as such the SSO plays no role in determining what licensing terms will look like. See id. at 992 (presenting problems associated with SSO rules).

55. See Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 500 (1988) (recognizing that SSOs have "traditionally been objects of antitrust scrutiny"). But see id. at 514-15 (White, J., dissenting) (expressing concern that antitrust scrutiny of SSOs will discourage participation).

56. Cf. Farrell et al., supra note 14, at 607 (acknowledging that legal issues relating to antitrust and standard-setting have been addressed by FTC and in law journals). In 1914, Congress passed the Federal Trade Commission Act (FTC Act) and created the FTC, conferring upon it broad powers to investigate and regulate American industry. See Federal Trade Commission Act 5, 15 U.S.C. § 41 (1961) (original version at ch. 311, § 1, 38 Stat. 717 (1914)) [hereinafter FTC Act] (creating FTC and providing for appointment of commissioners by President); see also Areeda et al., supra note 20, at 43-45 (discussing enactment of FTC Act); Franklin D. Jones, Historical Development of the Law of Business Competition, 36 Yale L. J. 351, 377 (1926) (mentioning President Wilson's support for creation of Federal Trade Commission). The FTC Act was thought of as a means of enforcing the Sherman Act, the enforcement of which until that point had not exactly "inspire[d] public confidence." See Areeda et al., supra note 20, at 43 (claiming that support for FTC came from those hostile to "big business" as well as from people in business world); Jones, supra, at 376-77 (highlighting ineffectiveness of then-current laws). The bulk of the FTC's power comes under Section 5 of the FTC Act, which declares "[u]nfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce" to be unlawful. See FTC Act § 45 (conferring power upon FTC); see also Jones, supra, at 377-78 (commenting on powers of FTC). The FTC Act was meant to cover not only those actions deemed illegal by the Sherman Act, but also actions that might eventually reach that level. See Fashion Originators' Guild of Am. v. Fed. Trade Comm'n, 312 U.S. 457, 466 (1941) ("[I]t was the object of the Federal Trade Commission Act to reach not
imposed antitrust liability on patent holders for deceiving SSOs and for engaging in various forms of patent hold-up.\textsuperscript{57} In providing a remedy, the FTC looked to prior cases that were decided on equitable estoppel grounds.\textsuperscript{58} These cases prohibited patent-holders from enforcing patents that they had failed to properly disclose.\textsuperscript{59}

In 1996, the FTC brought the first of these actions against Dell Computer Corporation.\textsuperscript{60} The FTC alleged that while participating with a SSO to adopt a design standard, Dell did not disclose that it held a patent for a key design feature, and certified that the standard did not infringe on any of Dell's IPRs.\textsuperscript{61} After the standard was adopted and became successful, Dell attempted to assert its IPRs; in response, the FTC commenced an enforcement action for unfair methods of competition in or affecting

merely in their fruition but also in their incipiency combinations which could lead to . . . trade restraints and practices deemed undesirable."); see also Jones, supra, at 378-79 (opining that term “unfair methods of competition" was used to prevent FTC's jurisdiction from being limited to practices already defined under antitrust laws). Differences between the FTC Act and the Sherman Act are otherwise limited, though one important distinction lies in the remedies available under each. Compare Sherman Act, 15 U.S.C. § 2 (1890) (making violation a felony punishable by time in jail and treble damages), with FTC Act § 5 (applying all remedies “available to Commission”); see also Appeals Court Rules that Deceptive Conduct in Standard Setting can Violate Antitrust Laws, STANDARDS BLOG (2007), http://www.consortium info.org/standardsblog/article.php?story=2007090607324049 [hereinafter Appeals Court Rules] (highlighting liability for “treble damages" under Sherman Act).

57. For a discussion of FTC cases, see supra notes 54-56 and infra notes 58-77 and accompanying text.


59. For a discussion of FTC cases, see supra notes 54-56 and infra notes 58-77 and accompanying text.

60. See Dell, 121 F.T.C. at 616 (reviewing claims against Dell).

61. See id. at 616-18 (laying out allegations against Dell). Dell is a member of the Video Electronics Standards Association (VESA), an SSO made up of most major American computer hardware and software manufacturers. See id. at 617 (remarking that Dell became member of VESA in February 1992). VESA was setting a standard for the design of a computer bus, which carries information and instructions between a computer's central processing unit and its peripheral devices. See id. (summarizing components of relevant standard). On July 20, 1992, following a vote approving the preliminary proposal of the standard, and again on August 6, 1992, when Dell gave final approval to the standard, a Dell representative certified in writing that, “to the best of his knowledge, ‘this proposal does not infringe on any trademarks, copyrights, or patents’ that Dell possessed.” See id. at 617 (referencing certifications given when VESA sought approval of standard by voting members). This was done despite the fact that in July 1991, Dell received a patent giving it exclusive rights to an essential element of the standard. See id. (highlighting relevant elements of Dell’s patent number 5,036,481).
commerce under Section 5 of the FTC Act. In that action, the FTC concluded that Dell’s conduct unreasonably restrained competition. The FTC found that Dell failed to act in good faith, concluded that the SSO would not have included Dell’s technology in the standard if it had known the actual status of Dell’s IPRs and entered a consent order prohibiting Dell from asserting that the use of the standard violated its IPRs.

In 2005, the FTC brought a similar action against the Union Oil Company of California (Unocal) for violations of Section 5 of the FTC Act. The FTC concluded that Unocal had made bad faith and deceptive misrepresentations to a state standards board concerning its IPRs. The FTC further found that the board relied on those misrepresentations in designing a new standard governing low-emission gasoline, which led directly to Unocal’s acquisition of monopoly power, and which was subsequently

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62. See id. at 617-18 (stating that standard was included in more than 1.4 million computers sold in eight months following standard’s adoption). Dell told VESA members manufacturing computers using the design standard that their implementation of the standard violated Dell’s exclusive rights and demanded meetings to try to determine how those rights would be “recognized.” See id. (indicating that Dell never renounced infringement claims).

63. See id. at 618 (asserting various ways in which Dell restrained competition). The FTC found that Dell restrained competition in the following ways:
   (a) Industry acceptance of the VL-bus design standard was hindered because some computer manufacturers delayed their use of the design standard until the patent issue was clarified.
   (b) Systems utilizing the VL-bus design standard were avoided due to concerns that patent issues would affect the VL-bus’ success as an industry design standard.
   (c) The uncertainty concerning the acceptance of the VL-bus design standard raised the costs of implementing the VL-bus design as well as the costs of developing competing bus designs.
   (d) Willingness to participate in industry standard-setting efforts have been chilled.
   Id. (same).

64. See id. at 623-24 (considering VESA’s policy imposing good faith duty to identify potentially conflicting patents and strong preference for adopting standards not including proprietary technology).


66. See id. at *2 (summarizing FTC’s administrative complaint against Unocal). Unocal, along with other members of “private industry groups,” was working with the California Air Resources Board (CARB) to produce low-emission gasoline regulations. See id. (providing relevant facts). During that process, Unocal told CARB that certain gasoline research was in the “public domain,” but at the same time pursued a patent enabling it to charge high royalties if the results of the research were included in CARB’s regulations. See id. (considering Unocal’s deception of CARB).
harmful to competition. Accordingly, the FTC entered a consent order requiring Unocal to cease enforcement of all of its relevant patents.

Finally, in 2006, in what was perhaps its most provocative action, the FTC concluded an action against Rambus, Inc. for violations of both Section 5 of the FTC Act and Section 2 of the Sherman Act. The FTC found that Rambus, a developer and licensor of computer memory technology and a member of an industry SSO, exploited its participation in that SSO to obtain patents covering technologies incorporated into the SSO’s memory standards. The FTC also found that Rambus misled other SSO members about the status of its current and pending patents. Rambus concealed its patents until the standard was adopted and the market “locked in.” Rambus then brought patent infringement lawsuits against SSO members using the standard. The FTC found that Rambus “was able to distort the standard-setting process and engage in anticompetitive ‘hold-up’ of the computer memory industry,” violating both the FTC Act and the Sherman Act.

In Rambus, the FTC held for the first time that deceptive conduct in association with a SSO constituted anticompetitive or “exclusionary conduct” within the meaning of Section 2 of the Sherman Act. In Rambus, the FTC entered a consent order requiring Unocal to cease enforcement of all of its relevant patents.

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67. See id. (remarking that “if [Unocal] were permitted to enforce its patent rights, companies producing this low-emission CARB gasoline would be required to pay royalties to [Unocal], the bulk of which would be passed on to California consumers in the form of higher gasoline prices . . . [which] could potentially result in over $500 million of additional consumer costs each year”).

68. See id. (noting Unocal agreed to requested relief).


70. See id. at *3-4 (discussing Rambus’s membership in Joint Electron Device Engineering Council (JEDEC)). Rambus was involved with JEDEC while JEDEC was setting standards for different kinds of DRAM, pieces of hardware used in connection essential to the memory functions of a computer. See id. at *5-6 (detailing technical background). JEDEC, like VESA, operated cooperatively and required members to participate in good faith. See id. at *4 (noting that JEDEC policy and practice requires members to reveal existence of patents and patent applications that could be enforced against those practicing standard).

71. See id. at *4-5 (describing Rambus’s successfully deceptive strategy). During the standard-setting process, Rambus not only refused to disclose the existence of its patents and patent applications, but it also led members of the SSO to believe it was not seeking patents to cover the standards being considered, and used the information it gained participating in the standard-setting process to amend its patent applications to ensure they covered the standard to be adopted. See id. (same).

72. See id. at *4-5 (discussing course of Rambus’s conduct).

73. See id. at *5 (describing Rambus’s strategy).

74. Id. at *3 (finding against Rambus).

75. See id. at *28 (defining anticompetitive or exclusionary conduct as “conduct other than competition on the merits—or other than restraints reasonably ‘necessary’ to competition on the merits—that reasonably appear[s] capable of making a significant contribution to creating or maintaining monopoly power” (quoting PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 651f, at 83-84 (2d ed. 2002))). But see Royall, supra note 28, at 45 (theorizing that such con-
the FTC accomplished the following: (1) it discussed the “unique potential [of the standard-setting process] to skew the competitive process,” (2) outlined the risks of competitive harm, (3) explained that that harm cannot be easily corrected and (4) noted the consequent scrutinizing of conduct related to standard-setting by courts.76 The FTC in Rambus utilized conduct should not be considered anticompetitive because these firms do not lose short-term profits and may have legitimate business reasons for concealing patent information from SSOs).

One commentator has suggested that determining whether unilateral conduct affecting the standard-setting process can be regarded as anticompetitive conduct is challenging because of the lack of prior precedent or debate in either the courts or the “antitrust community” about the scope and definition of anticompetitive conduct. See Royall, supra note 28, at 44 (emphasizing significance of questions raised in Rambus, Unocal and Dell).

In finding that Rambus’s conduct was anticompetitive, the FTC compared it to false or misleading advertising in that deception distorts choice, makes benefits of alternatives harder to determine and does not allow technologies to be selected efficiently. See Rambus, 2006 WL 2330117, at *29 (explaining effects of deceptive conduct). Later in the decision, the court drew an important distinction between deception of SSOs and false or misleading advertising, however, because of the cooperative nature of the standard-setting process, which allows deception to cause lasting competitive harm. See id. at *32 n.154 (distinguishing situation in Rambus from that of American Council of Certified Podiatric Physicians & Surgeons v. American Board Of Podiatric Surgery, 323 F.3d 366 (6th Cir. 2003), and American Professional Testing Service v. Harcourt Brace Jovanovitch Legal & Professional Publication, Inc., 108 F.3d 1147 (9th Cir. 1997), which applied rebuttable presumption that misleading advertising has de minimis effect on competition).

76. See Rambus, 2006 WL 2330117, at *33-34 (noting that “[t]he risk of competitive harm is heightened in the face of [anticompetitive] conduct that does not constitute competition on the basis of efficiency and that interferes with the cooperative nature of the standard-setting process”). The FTC argued in Rambus that deception distorts the selection of technologies to be included in standards and eludes the protections designed by SSOs to reduce the impact of monopoly power. See id. at *33 (explaining results of deception of SSOs). The FTC further noted that competitive harm caused by deceiving SSOs cannot be quickly or easily fixed once a standard has been chosen and the industry becomes locked in. See id. (distinguishing deception of SSOs from false advertising that can be corrected swiftly by “counter-advertising”). The FTC warned that if anticompetitive conduct diminishes the “efficiencies” gained through standard-setting, competition may be harmed such that the anticompetitive harm may exceed the remaining efficiencies, and standard-setting would no longer be beneficial on balance. See id. (describing dangers posed by anticompetitive conduct to SSOs).

The Supreme Court has rejected efforts to bias standard-setting by “stacking” the SSO with voters who want to exclude a competing product, and recognized that “power to distort the interpretation of standards is the ‘power to frustrate competition in the marketplace.’” Id. at *34 (citing Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 508 (1988); Am. Soc’y of Mech. Eng’rs, Inc. v. Hydrolevel Corp., 456 U.S. 556, 571 (1982)) (exposing SSOs to antitrust scrutiny). But cf. Hynix Semiconductor Inc. v. Rambus Inc., 441 F. Supp. 2d 1066, 1080-81 (N.D. Cal. 2006) (holding that, without more, breach of SSO policies alone does not give rise to antitrust liability); Townshend v. Rockwell Int’l Corp., 55 U.S.P.Q.2d 1011, 1013-14 (N.D. Cal. 2000) (dismissing antitrust claim alleging that prior to adoption of standard incorporating proprietary technology, proposed licensing terms that violated SSO’s patent policy were submitted to SSO and that litigation involving relevant IPRs had not been disclosed).
the court's reasoning from United States v. Microsoft, which established that deception can constitute anticompetitive conduct sufficient to support a Section 2 claim. The FTC analogized the environment present in Microsoft—where software vendors expected the firm not to mislead them—to the environment of SSOS, where members are expected to act cooperatively. The FTC also noted that the "magnitude of potential anticompetitive consequences may . . . be as substantial as it was in Microsoft, given the potential for a standard to create market or monopoly power."

III. THE THIRD CIRCUIT TAKES ON DECEPTION IN STANDARD-SETTING ORGANIZATIONS IN BROADCOM CORP. v. QUALCOMM, INC.

A. Factual Background and Broadcom's Complaint

Wireless telephone technology in the United States widely utilizes two different, non-interoperable technology paths. "Code Division Multiple Access" (CDMA) path technology is currently in use by Verizon Wireless and Sprint Communications. "Global System for Mobility" (GSM) path technology is currently in use by AT&T Wireless and T-Mobile. Because those technology paths are not interoperable, unique sets of standards

In April 2008, the D.C. Circuit overturned the FTC's decision in Rambus. See Rambus Inc. v. F.T.C., 522 F.3d 456 (D.C. Cir. 2008). The Rambus court found that the Commission failed to prove that the SSO in question would not have utilized Rambus's technology in its standard if there had been full disclosure, and that therefore there was no proof of anticompetitive harm. See id. at 466 (noting that possibility of using Rambus's technology was "expressly left open"). The D.C. Circuit's decision, however, does not limit the relevance of the FTC's analysis as relied on by the Third Circuit in Broadcom. See id. at 14-17 (acknowledging that deceptive conduct can have anticompetitive effect and distinguishing Broadcom).

77. 253 F.3d 34 (D.C. Cir. 2001).
78. See id. at 76-77 (holding that in environment in which software developers reasonably expected Microsoft not to mislead them, Microsoft's deceptive conduct was anticompetitive). In Microsoft, the court found that Microsoft had marketed "software-development tools" that would allow software developers to create programs that did not need to run on Microsoft's operating system, when in fact those programs could only run on Microsoft's operating system. See id. (commenting on Microsoft's deceptive tactics).
79. See Rambus, 2006 WL 2330117, at *34 (noting that "[i]n a consensus-oriented context, participants in the standard-setting process are likely to be less wary of deception; they are less likely to detect and take countermeasure to counteract it, and anticompetitive effects therefore are more likely to result").
80. Id. (suggesting importance of potential for antitrust liability in standard-setting process).
82. See Broadcom, 501 F.3d at 303 (explaining elements of wireless technology).
83. See id. (same).
have emerged for each. The Universal Mobile Telecommunications System (UMTS) standard governs GSM-path networks; the European Telecommunications Standards Institute (ETSI) created the UMTS standard and Qualcomm supplies and holds IPRs in much of the technology essential to it. The ETSI, like other SSOs, requires that companies whose technology it includes in standards license their technology on FRAND terms.

In its suit, Broadcom claimed that it had been preparing to enter the market for UMTS-path chipsets—components in all cellular telephones that aid in the transmission of information—and that after purchasing a UMTS chipset developer, Qualcomm had demanded that Broadcom license its UMTS technology on allegedly non-FRAND terms. On July 1, 2005, Broadcom filed an action in the United States District Court for the District of New Jersey, alleging that Qualcomm was a member of the ETSI and was therefore bound to follow its IPR policy, which included a commitment to license technology on FRAND terms. Broadcom further alleged that Qualcomm had induced the ETSI and other SSOs to include Qualcomm’s technology in the UMTS standard by falsely agreeing to follow those IPR policies. Broadcom alleged that Qualcomm already had a 90% share in the CDMA-path chipset market, and that by withholding FRAND pricing on UMTS technology, Qualcomm had coerced cell phone manufacturers to purchase only Qualcomm UMTS-path chipsets. According to Broadcom, these actions were part of Qualcomm’s effort to obtain a monopoly in the UMTS-path chipset market. Broadcom argued that the “intentional acquisition of monopoly power through deception of an S[S]O . . . violates antitrust law.”  

84. See id. at 303-04 (commenting on interplay of two technology paths).
85. See id. at 304 (discussing third generation GSM technology).
86. See id. (explaining that licensing requirements exist because of potential for IPR owners to “exert undue control over the implementation of industry-wide standards”).
87. See id. at 305 (indicating Broadcom’s refusal to such terms). Chipsets transmit information to cellular “base stations,” which then transfer that information to and from telephone and computer networks. See id. at 303 (discussing factual background).
88. See id. at 304 (laying out Broadcom’s complaint).
89. See id. (alleging that ETSI included Qualcomm’s technology in UMTS standard “only after, and in reliance on, Qualcomm’s commitment to license that technology on FRAND terms”).
90. See id. (explaining Broadcom’s allegations).
91. See id. (describing Qualcomm’s attempts to monopolize industry). Broadcom alleged that Qualcomm was attempting to monopolize the UMTS-path chipset market to protect its existing monopoly in CDMA technology. See id. (listing reasons for Qualcomm’s conduct).
92. Id. (asserting that Qualcomm violated Section 2 of Sherman Act). Broadcom also alleged that Qualcomm breached its FRAND commitments by demanding “discriminatorily higher royalties” from its competitors and those customers using non-Qualcomm chipsets. See id. (discussing Broadcom’s complaint).
under the Sherman Act in the form of a judgment of treble damages and injunctive relief.93

B. The District Court’s Decision in Broadcom

The district court granted Qualcomm’s motion to dismiss Broadcom’s complaint under Federal Rule of Civil Procedure 12(b)(6) for failure to state a claim upon which relief may be granted.94 The court noted that Qualcomm had a legal monopoly on its patented technology, which gave Qualcomm the right to exclude its competitors and decide by which terms its technology would be distributed.95 Though the district court acknowledged that “industry-wide standards merit ‘additional antitrust scrutiny,’” it concluded that including Qualcomm’s technology in the UMTS standard did not harm competition because “absence of competition [is] the inevitable result of any standard-setting process.”96 The district court found that Qualcomm’s alleged deception of the SSO was of “no moment under antitrust law” because the standard would have eliminated competition regardless of whose technology was included.97

C. The Third Circuit’s Analysis in Broadcom

In reversing the district court’s decision, the Third Circuit held in Broadcom that

in a consensus-oriented private standard-setting environment, . . . a patent holder’s intentionally false promise to license essential proprietary technology on FRAND terms, . . . coupled with an S[SO]’s reliance on that promise when including the technology in a standard, . . . and the patent holder’s subsequent breach of that promise, is actionable anticompetitive conduct.98

The court began its discussion by considering the requirements of Section 2 of the Sherman Act (under which Broadcom had asserted its claims), noting that Section 2 is the element of antitrust law “designed to curb the excesses of monopolists and near-monopolists.”99 The Broadcom court utilized the two-prong analysis for determining liability under Section 2,

93. See Complaint at 46, Broadcom Corp. v. Qualcomm, Inc., 501 F.3d 297 (3d Cir. 2007) (No. 05-3350) (detailing request for relief).
94. See Broadcom, 501 F.3d at 305 (describing actions taken by district court).
95. See id. (discussing district court’s opinion).
96. See id. (commenting on district court’s focus on result of standard-setting).
97. See id. (highlighting findings of district court). Furthermore, the district court found the allegations that Qualcomm had attempted to monopolize the market for UMTS chipsets were insufficient because the Complaint did not provide enough information about the market for UMTS chipsets to infer that Qualcomm’s conduct was anticompetitive. See id. (same).
98. Id. at 314 (finding Qualcomm’s conduct actionable).
99. See id. at 306 (quoting LePage’s Inc. v. 3M, 324 F.3d 141, 169 (3d Cir. 2003)) (laying out requirements under Section 2 of Sherman Act). For a discus-
which requires both "the possession of monopoly power in the relevant market and . . . the willful acquisition or maintenance of that power." 100

In determining whether Qualcomm had engaged in anticompetitive conduct, the Third Circuit considered each requirement, but focused its attention primarily on the second prong. 101 Following federal precedent and its own reasoning in LePage's v. 3M, 102 the Broadcom court noted that anticompetitive conduct can take many forms, but usually consists of obtaining or maintaining monopoly power through competition "on some basis other than the merits." 103 The court was careful, however, to note that conduct that merely harms competitors—but not the "competitive process itself—is not anticompetitive. 104

Noting that "[t]he primary goal of antitrust law is to maximize consumer welfare by promoting competition," the court in Broadcom went to great lengths to extol all the possible procompetitive benefits of standards

sion of Section 2 of the Sherman Act, see supra notes 20-27 and accompanying text.

100. Broadcom, 501 F.3d at 307 (quoting United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966)) (explaining anticompetitive conduct requirement). The Court defines monopoly power as being able to control prices and exclude competition from the market, and asserts that such monopoly power exists when a firm can raise its prices without making its competitors increase output or reduce prices. See id. (citing Grinnell, 384 U.S. at 571; Harrison Aire, Inc. v. Aerostar Int'l, Inc., 423 F.3d 374, 380 (3d Cir. 2005)) (commenting on issue of monopoly power).

101. See id. at 308-14 (discussing monopolization under Section 2 and determining Qualcomm's conduct was anticompetitive).

102. 324 F.3d 141 (3d Cir. 2003).

103. See id. at 308 (citing Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 604-05, 605 n.32 (1985)) (laying out anticompetitive conduct element). For further discussion of the anticompetitive conduct requirement, see supra notes 25-27 and accompanying text.

104. See id. (concluding that "[c]onduct that merely harms competitors . . . while not harming the competitive process itself, is not anticompetitive"). The Third Circuit also rejected the idea that Qualcomm's deception of the SSO is protected from antitrust liability by the First Amendment. See id. (rejecting Qualcomm's Noerr-Pennington defense); see also 3rd Circuit Rules that Deception of SDO Can Give Rise to Claims for Violation of Sherman Act, TECHLAW J., Sept. 4, 2007, http://www.techlawjournal.com/topstories/2007/20070904.asp (last visited Sept. 29, 2008) [hereinafter 3rd Circuit Rules] (commenting that doctrine allows businesses to "combine and lobby to influence the . . . government or administrative agencies without antitrust liability, because the First Amendment right of petition protects such activities"). Accepting that while engaged in some activities, such as political lobbying, companies might have "broad immunity" from antitrust claims, the court noted that this is not so in "less political areas," and asserted that private SSOs have consistently been held up to antitrust scrutiny. See Broadcom, 501 F.3d at 308 (citing Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 500 (1988); Am. Soc'y of Mech. Eng'rs v. Hydrolevel Corp., 456 U.S. 556, 571 (1982)) (commenting on Noerr-Pennington doctrine as it applies to SSOs). A similar defense was also rejected in Unocal. See 3rd Circuit Rules, supra (noting that Unocal unsuccess-
and SSOs. The court went on, however, to recognize the need for "meaningful safeguards" on SSOs. The court noted that rules on disclosure of the status of relevant IPRs, as well as promises to license relevant technology on FRAND terms, are essential to the standard-setting process. In doing so, the Third Circuit concluded that deception of a SSO with respect to promises to license technology on FRAND terms may be actionable anticompetitive conduct under Section 2.

IV. WHAT DOES BROADCOM MEAN FOR STANDARD-SETTING?

A. The Third Circuit Properly Follows and Extends Federal Precedent to Protect Standard-Setting

Drawing from Supreme Court precedent—and most heavily from the FTC’s findings in Dell, Unocal and Rambus—the Third Circuit appreciated the very real danger that deception of SSOs poses to the competitive pro-

105. See Broadcom, 501 F.3d at 308-09 (explaining ways in which standard-setting promotes competition). The court noted that private standard-setting advances consumer welfare and competition on “several levels.” See id. at 308 (same). First the court discussed the benefits to the “end-consumer market.” See id. (same). Stressing that standards “ensure interoperability of products,” the court suggested that standards facilitate information sharing among consumers, which enhances the utility of all products and enlarges the market. See id. (describing benefits of standard-setting to end-consumer market). According to the Broadcom court, this allows firms to spread the costs of research and development between more consumers, which will lower prices. See id. (same). The court noted that standards also lower costs to consumers because switching between competing products and services enhances competition among suppliers. See id. (same). The court went on to discuss the ways in which standards promote competition in upstream markets. See id. at 309 (discussing procompetitive benefits of standard-setting).

The court concluded that SSOs might be better able to objectively make comparisons between “competing technologies, patent positions and licensing terms before an industry becomes locked in to a standard.” Id. (commenting on benefits of standard-setting to up-stream markets). Further, the court pointed out that standard-setting reduces the risk to both producers and consumers of investing in technologies that may fail. See id. (highlighting procompetitive benefits of standard-setting). For further discussion of the procompetitive benefits of standard-setting, see supra notes 34-39 and accompanying text. It is because of these “efficiencies” created by standard-setting that standard-setting “which might otherwise be viewed as a naked agreement among competitors not to manufacture, distribute, or purchase certain types of products,” does not violate antitrust laws. See Broadcom, 501 F.3d at 308 (citing Allied Tube, 486 U.S. at 500-01) (finding procompetitive benefits of standard-setting limit antitrust liability).

106. See id. at 310 (citing Allied Tube, 486 U.S. at 501; Hydrolevel, 456 U.S. at 572; Clamp-All Corp. v. Cast Iron Soil Pipe, Inst., 851 F.2d 478, 488 (1st Cir. 1988)) (recognizing anticompetitive risks of standard-setting).

107. See id. at 313-14 (hypothesizing that either making or not making FRAND commitments is key indicator of cost of implementing particular technologies in standards).

108. See id. at 314 (overruling district court’s decision).
Utilizing the reasoning in those cases and recognizing the importance of FRAND commitments in preventing problems of patent hold-up, the court took the necessary and inevitable next step in standard-setting jurisprudence, holding that Qualcomm's actions could be deemed anticompetitive conduct under Section 2 of the Sherman Act.110

Prior case law that the Third Circuit followed in Broadcom focused on the problem of patent hold-up.111 Nevertheless, Broadcom is a case of first impression regarding the handling of a breached promise to license technology on FRAND terms.112 These previous cases made clear, however, that FRAND licensing requirements are put in place to prevent firms from taking advantage of the inclusion of proprietary technology in standards—in other words, to limit the ability of firms to profit from engaging in patent hold-up.113 As such, protecting SSO FRAND licensing requirements by imposing antitrust liability on those making such false promises represents the next logical step after bringing antitrust liability to bear upon those engaging in patent hold-up.114

There are, of course, critics of the idea that SSOs and participants in the standard-setting process should face antitrust scrutiny.115 Some argue that such scrutiny will discourage involvement in SSOs, which—given the importance of standards—would be harmful to the economy.116 Others stress that patents create legal monopolies and that firms are well within

109. See id. at 310-14 (describing issue of “patent hold-up”); see also Rock, supra note 13 (commenting that “Third Circuit’s decision in Broadcom brings that case in line with Rambus”).

110. See Broadcom, 501 F.3d at 314 (holding Qualcomm’s conduct actionable).

111. For a discussion of claims in previous FTC cases, see supra notes 54-80 and accompanying text.

112. See Appeals Court Rules, supra note 56 (noting that Third Circuit created “new case law” in Broadcom); see also Mary Pat Gallagher, 3rd Circuit Rules on Patent Holders' Antitrust Liability in Qualcomm Case, N.J. L.J. (Sept. 6, 2007), available at http://www.law.com/jsp/article.jsp?id=1188982958838 (remarking that Broadcom is first case to address this particular issue).

113. See, e.g., Rambus, 2006 WL 2330117, at *4 (discussing steps taken by SSOs to mitigate risk of hold-up); see also Broadcom, 501 F.3d at 313 (noting that SSO IEEE’s bylaws preclude approving standards known to include technology not committed to being licensed on FRAND terms); Masoudi Address, supra note 7 (describing FRAND commitments as one “major attempt” to solve inefficiencies created by inclusion of patented technology in standards). For further discussion of SSO rules designed to prevent patent hold-up, see supra notes 51-54 and accompanying text.

114. Cf. Farrell et al., supra note 14, at 605 (suggesting allegations of breaching promises to license on FRAND terms have “similar economic logic” to cases of patent hold-up).

115. See, e.g., Royall, supra note 28, at 45 (questioning whether deception of SSOs can constitute anticompetitive conduct).

116. Cf. Allied Tube & Conduit Corp. v. Indian Head, Inc., 486 U.S. 492, 514-15 (1988) (White, J., dissenting) (expressing concern about effects of antitrust scrutiny on involvement in SSOs); see also Curran, supra note 21, at 994 (hypothesizing that conflicts over FRAND terms increase costs of participating in SSOs and liability concerns, which would threaten viability of SSOs).
their rights to determine the terms upon which those technologies will be licensed.\footnote{117} In fact, Qualcomm asserted in its defense to Broadcom's claims that it was merely exercising its patent rights, an argument the district court fully embraced.\footnote{118} Other district courts have similarly held that, without more, contravention of SSO policies cannot constitute antitrust violations.\footnote{119}

Despite this criticism, the Broadcom decision falls in line with the "emerging view" of government authorities, the industry and commentators.\footnote{120} The prevailing view is that strong support is needed for the stan-

\footnote{117} See Klitzke, \textit{supra} note 23, at 567 (declaring that under patent laws, patent owner may negotiate as many licenses as it wishes without violating Sherman Act); \textit{Mourning the Consumer Demand Test}, \textit{supra} note 30, at 112 (suggesting that patent laws allow some anticompetitive conduct otherwise prohibited).

\footnote{118} See Broadcom, 501 F.3d at 305 (recognizing that Qualcomm has legal monopoly in its patented technology, giving it right to exclude competition and set licensing terms).

\footnote{119} See Hynix Semiconductor Inc. v. Rambus Inc., 441 F. Supp. 2d 1066, 1080-81 (N.D. Cal. 2006) (holding that without more, breach of SSO policies alone does not give rise to antitrust liability); Townshend v. Rockwell Int'l Corp., 55 U.S.P.Q.2d 1011, 1024 (N.D. Cal. 2000) (dismissing antitrust counterclaim alleging that, prior to adoption of standard incorporating proprietary technology, proposed licensing terms that violated SSO's patent policy were submitted to SSO and litigation involving relevant IPRs had not been disclosed).

\footnote{120} See Broadcom, 501 F.3d at 314 (remarking that holding "represents the emerging view of enforcement authorities and commentators"); see also Standards Development Organization Advancement Act of 2004, 15 U.S.C. §§ 4302-03 (2004) (providing that conduct of members engaged in standard-setting shall not be considered illegal \textit{per se} and restricting recovery for those entitled to recovery to actual damages); \textit{Appeals Court Rules}, \textit{supra} note 56 (highlighting Broadcom decision as "the latest in a string of decisions, as well as business advice letters and public statements by US trade regulators, that support the standard setting process").

One of the most important statements on the government's position towards SSOs and standard-setting is a business review letter written by Thomas O. Barnett, an Assistant Attorney General for the Department of Justice's Antitrust Division, to Robert A. Skitol—a prominent attorney in the field—who represented VITA, an international trade association, and its standard development subcommittee, VSO. \textit{See Letter from Thomas O. Barnett, Assistant Attorney Gen. for the Dep't. of Justice's Antitrust Div., to Robert A. Skitol, Esq. 1 (Oct. 30, 2006), available at http://www.usdoj.gov/atr/public/busreview/219380.pdf} \footnote{hereinafter Business Review Letter} (responding to request for statement of DOJ's "antitrust enforcement intentions" as to VITA's new patent disclosure and licensing policy). The letter reassured Mr. Skitol that VITA's proposed policy—requiring the disclosure of patents considered essential to the implementation of a new standard, commitment to FRAND licensing terms and declarations of the most restrictive licensing terms that will be required—was "an attempt to preserve competition and thereby to avoid unreasonable patent licensing terms that might threaten the success of future standards and to avoid disputes over licensing terms that can delay adoption and implementation after standards are set." \textit{See id.} at 10 (describing positive attributes of VITA policy). The letter went on to say that the policy was a "sensible effort to address problems inherent in the standard-setting process, and declared that the DOJ had no intention of taking antitrust enforcement action against such conduct. \textit{See id.} (remarking that implementation of policy should "preserve, not restrict," competition); see also 3rd Circuit Rules, \textit{supra} note 10 (remarking on fact that Amicus Briefs by five SSOs as well as American Antitrust Institute and Con-
standard-setting process, which continues to increase in importance in this “modern, networked world,” and that establishing legal guidelines to protect the process is an essential part of that support.\(^{121}\) The development of legal guidelines, which provide an enforcement mechanism for rules put in place by SSOs, ensures greater accountability for those engaged in the standard-setting process.\(^{122}\) The Third Circuit achieved this goal with its decision in \textit{Broadcom}.\(^{123}\) Ultimately, supporting SSOs means protecting consumers, which is the fundamental goal of antitrust law.\(^{124}\)

\textbf{B. The Third Circuit Focuses on Conduct during the Standard-Setting Process}

In \textit{Broadcom}, the Third Circuit focused its attention on Qualcomm’s actions during the standard-setting process itself, rather than Qualcomm’s actions after the standards were in place.\(^{125}\) The district court’s view was that “a patent is a patent, even if you allegedly lied about it before; and having a patent means never having to say you are licensing.”\(^{126}\) This view ignored the seriousness of the problem associated with deception of SSOs and the reality that there is an element of choice involved in the standard-setting process.\(^{127}\) SSOs often have the ability to choose between alternative technologies to include in standards; they use policies on disclosure of IPRs and commitments to FRAND licensing terms as a criterion for mak-

\(^{121}\) See, e.g., \textit{Appeals Court Rules}, supra note 56 (detailing importance of supporting standard-setting).

\(^{122}\) See id. (suggesting that \textit{Broadcom} ruling “adds a new weapon to the legal arsenal that can be used to protect standard setting”).


\(^{124}\) See \textit{Skitol}, supra note 14, at 744 (theorizing that evolution of law to protect against misuse of standard-setting process will “materially benefit consumers”).

\(^{125}\) See \textit{Broadcom}, 501 F.3d at 308-14 (describing elements of standard-setting process and risks posed by deception at that stage); see also \textit{Rock}, supra note 13 (suggesting that Third Circuit’s disagreement with trial court “turn[s] on where the focus should be in the process”).

\(^{126}\) See \textit{Rock}, supra note 13; see also \textit{Broadcom}, 501 F.3d at 305 (pointing out that district court did not discuss possibility that FRAND commitments are meant to prevent unlawful monopoly or that SSO may have chosen not to include Qualcomm’s technology).

\(^{127}\) See \textit{Gallagher}, supra note 112 (“‘[T]he court below, to some extent, immunized people and companies who manage to get their technology put into a standard’ allowing them to have a monopoly without looking at how they got it.” (quoting David Stone, attorney at Boies Schiller & Flexner LLP, representing Broadcom)); \textit{Rock}, supra note 13 (discussing implications of district court’s decision).
ing that choice. Further, there is often strong competition between firms to be considered in the setting of a standard, which deception of the SSO perverts. In focusing on the end result of the standard-setting process, the district court "fundamentally misunderstood the way that S[S]O's work," and precluded antitrust liability in all circumstances.

The Third Circuit, in contrast, both recognized the seriousness of the problem posed by deception of SSOs and rejected the notion that the result of the standard-setting process is necessarily anticompetitive. As noted above, the Third Circuit in Broadcom expansively discussed the procompetitive benefits of standard-setting, and at the same time stressed the potential for anticompetitive consequences as a result of abuse of the process. In focusing on Qualcomm's actions during the standard-setting process, the Third Circuit provided an enforcement mechanism for SSO policies that should help deter further manipulation of such systems in the future and should protect the procompetitive benefits created by standards and SSOs.

V. LINGERING QUESTIONS POST-BROADCOM

Despite the Third Circuit's success in Broadcom in bridging the divide between standard-setting and antitrust laws, the decision is not without uncertainty, because it took on the issue of FRAND licensing. Although commentators and courts recognize the importance of enforcing commitments to FRAND licensing, the concept of FRAND licensing is ambiguous and ill-defined. There will continue to be conflict over what constitutes

128. See Broadcom, 501 F.3d at 313 (highlighting importance of choosing between alternatives to develop standards).

129. See id. (noting that technologies compete over cost and performance prior to adoption of standards).


131. See Gallagher, supra note 112 ("[T]he case 'reaches to the heart of how antitrust law should function in connection with standard setting and licensing involving intellectual property rights' and implicat[es] the interests of consumers who pay the price for unlawful monopolization in the form of higher prices and less innovation." (quoting Brief for American Antitrust Institute and the Consumer Federation of America as Amici Curiae in Support of Neither Party, Broadcom Corp. v. Qualcomm, Inc., No. 06-4292 (3d Cir. Dec. 19, 2006))) (stressing importance of Broadcom decision).

132. For a discussion of the Third Circuit's analysis in Broadcom, see supra notes 98-108 and accompanying text.

133. See Appeals Court Rules, supra note 56 (discussing impact of Broadcom decision).

134. See id. (commenting that Broadcom court did not "shrink" from FRAND question).

135. See Gil Ohana et al., Disclosure and Negotiation of Licensing Terms Prior to Adoption of Industry Standards: Preventing Another Patent Ambush, 24 EUR. COMPETITION L. REV. 644, 647 (2003) (concluding that requiring commitments of FRAND licensing has not fixed problem of patent hold-up and that such obligations do not
FRAND terms, and it is likely that it will fall to the courts to resolve these disputes.\textsuperscript{136} This raises the very real question of whether courts are equipped to determine what is and is not "fair, reasonable and non-discriminatory" in complex, rapidly changing industries.\textsuperscript{137} In fact, some commentators are now suggesting that beyond commitments to license technology on FRAND terms, SSOs should actively engage in the disclosure and negotiation of licensing terms before the standard is actually set.\textsuperscript{138}

As technology continues to increase in complexity, and consumers continue to demand more choices and better products at lower prices, standards and SSOs will remain an indispensable component of high-technology industries.\textsuperscript{139} \textit{Broadcom} should prove to be a successful step forward for standard-setting jurisprudence, even though the field is still in its relative infancy.\textsuperscript{140} In \textit{Broadcom}, the Third Circuit provided a template for practitioners and other courts facing similar issues, and made clear that all is not only not fair in standard-setting, but may, in fact, result in antitrust liability.\textsuperscript{141}

\textit{Victoria Poulton}

provide certainty); Weiser, \textit{Making the World Safe}, supra note 1 (manuscript at 25-27) (going over range of commentator opinions regarding ambiguity of FRAND licensing terms); \textit{Appeals Court Rules}, supra note 56 (suggesting that FRAND commitments are "one of the most troublesome aspects of standard setting"); cf. Curran, supra note 21, at 992 (noticing that vague SSO policies result in complicated negotiations over FRAND terms).

136. Cf. Curran, supra note 21, at 992-93 (remarking that disputes over FRAND terms often result in long, complicated and costly litigation).

137. See Gallagher, supra note 112 (calling case "a business dispute" and noting SSO left FRAND terms "explicitly undefined" so market participants could later decide requirements (quoting Evann Chesler, attorney for Cravath Swaine & Moore LLP, representing Qualcomm)); Weiser, \textit{Making the World Safe}, supra note 1 (manuscript at 12) (opining that courts' past approach to evaluating merits of standards or SSOs themselves suggests their own inability to "render effective judgments").

138. See, e.g., Curran, supra note 21, at 994 (realizing that conflicts over FRAND terms could be prevented by specifying licensing terms before adopting standard); Ohana et al., supra note 135, at 648-49 (recognizing benefits of setting license terms before setting standards); Weiser, \textit{Making the World Safe}, supra note 1 (manuscript at 27) (highlighting use of "front-end" negotiation of license terms as method of preventing FRAND problems).

139. See Curran, supra note 21, at 983 ("[S]tandard-setting [will play an important role in the technological innovation that will drive much of this nation's competitive vigor in the 21st century." (quoting In re Dell Computer Corp., 121 F.T.C. 616, 626 (1996))). For a discussion of the importance of standards and SSOs, see supra notes 28-33 and accompanying text.

140. For a discussion of standard-setting jurisprudence, see supra notes 55-80 and accompanying text.

141. For a discussion of the holding in Broadcom, see supra note 98 and accompanying text.