Would You Go to Work If You Weren't Paid? The Problem of Incentives for Participants in Standards Development Organizations

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WOULD YOU GO TO WORK IF YOU WEREN’T PAID? THE PROBLEM OF INCENTIVES FOR PARTICIPANTS IN STANDARDS DEVELOPMENT ORGANIZATIONS

Consumer telephone hardware choices are plentiful, from handsets to headsets, but all have at least this much in common: no matter which telephone you choose to buy, it will connect to the public telephone system using a standard RJ-11 plug.1 This is because many products, whether as ordinary as telephones or as extraordinary as nuclear reactors, are standardized for safety, for quality, and for interoperability.2 Standards-setting affects almost everything about us: our homes, our offices, even the air we breathe.3 All of this occurs out of sight for the

1. The RJ-11 (Registered Jack-11) is the most common telephone plug. It was originally invented by AT&T and is now widely used. For more on the process by which the FCC adopts technical standards, see 47 C.F.R. § 68.7 (2005) (adopting technical criteria published by the Administrative Council for Terminal Attachments) and ADMINISTRATIVE COUNCIL FOR TERMINAL ATTACHMENTS, OPERATING PRINCIPLES AND PROCEDURES (2003), http://www.part68.org/Documents/ACTA_OPP_REV_1.6.pdf.

2. ABA SECTION OF ANTITRUST LAW, HANDBOOK ON THE ANTITRUST ASPECTS OF STANDARDS SETTING 6–12 (2004) [hereinafter ABA HANDBOOK ON STANDARDS SETTING]. The variety of existing standards, relating to products from the utterly commonplace to the highly extraordinary, is impressive in its own right. See id. Among the mundane, one organization has adopted a standard for library shelving. See National Information Standards Organization, Z39.73—Single-Tier Steel Bracket Library Shelving, http://www.niso.org/standards/standard_detail.cfm?std_id=491 (last visited Feb. 5, 2005). In stark contrast stand those standards governing the construction of nuclear power plants. See, e.g., IEEE Standards Association, IEEE Revises Nuclear Power Standard for Class 1E Cables, Starts Revision for Power Supply Standard, http://standards.ieee.org/announcements/pr_690rev.html (last visited Feb. 5, 2005) [hereinafter IEEE]. Dividing these countless and diverse standards into rigid categories such as safety, quality, or interoperability standards captures little of the complex role standards play. The ABA Antitrust Section divides standards into five categories: quality standards (“define acceptable product characteristics related to attributes such as performance, safety, or efficiency”), informational standards (“sets parameters for the type of information conveyed about the product”), uniformity standards (“minimizes proliferation of product categories and attempts to achieve the optimum variety of a particular product”), interoperability standards (“assure that two related products or processes will fit and/or operate with one another”), and professional conduct and certification standards (“protect the public from professionals who are in a position to take unfair advantage of the consumer’s situation”). ABA HANDBOOK ON STANDARDS SETTING, supra, at 6–12.

3. See, e.g., Union Oil Co. of Cal., Docket No. 9305, 14 (F.T.C. Nov. 25, 2003) (initial decision), http://www.ftc.gov/os/adpro/d93102/101125aljsinitialdecision.pdf. Some air quality standards are determined, at least in part, through the standards development organization (SDO) process. For example, the California Air Resources Board (CARB), a department of the California Environmental Protection Agency, was established in 1967 to “protect the health, welfare, and ecological resources of California through the effective and efficient reduction of air pollutants.” Id. In the late 1980s, in accordance with its mandate to reduce air pollutants, CARB was directed to adopt “new standards for automobile fuels and low emission vehicles.” Id. at 15. For more on CARB and its air quality standards-development activities, see discussion infra Parts II.A–B.
average consumer, yet we all have a stake in the standards ultimately chosen.\footnote{See Donald J. LeCraw, Some Economic Effects of Standards, 16 \textit{Applied Econ.} 507, 507 (1984) (“Although standards pervade the economic, political, social and technological life of modern man, they have been largely ignored by the general public.”). See also International Organization for Standardization, \textit{Overview of the ISO system}, http://www.iso.org/iso/en/aboutiso/introduction/index.html (last visited Feb. 5, 2005) (describing the “invisible” contribution to “most aspects of our lives”). For more on the International Organization for Standardization, see infra note 37.} We want the best airbag performance standards,\footnote{See, e.g., 49 C.F.R. §§ 552, 571, 585, 595 (2005) (containing recent updates to the National Highway Traffic Safety Administration’s (NHTSA) airbag safety performance standards). Unlike many standards-setting organizations, the NHTSA is a governmental agency.} the safest nuclear power plants,\footnote{See supra note 3.} the cleanest air,\footnote{See supra note 4, at 514 (Standards “may confer economic benefits and may impose economic costs on the economy.”). In the last two decades, the FTC has been increasingly guided by consumer welfare in its antitrust enforcement decisions. Indeed, “the promotion of consumer welfare has become the sole guiding principle of the antitrust laws. Consumer welfare has in turn been equated with economic efficiency.” \textit{David A. Balto, Intellectual Property and Antitrust: General Principles, Intellectual Property and Antitrust,}}\footnote{See Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law § 100a (2d ed. 2000) (The “principal objective of antitrust policy is to maximize consumer welfare by encouraging firms to behave competitively . . . ”).} and we want all of this at the lowest price.\footnote{ABA \textit{Handbook on Standards Setting}, supra note 2, at 4. In 1995, there were more than 93,500 active standards, not including those imposed at the state, county and local levels. \textit{Id.} Of these, some 52,000 were imposed by the federal government and the remainder were promulgated by private standards-development organizations. \textit{Id.} Almost three-quarters of the federally imposed standards originated with the Department of Defense. \textit{Id.}}

The number of active technical standards in existence today is staggering.\footnote{The number of active technical standards in existence today is staggering. Many of these, including plumbing codes\footnote{See, e.g., \textit{International Association of Plumbing and Mechanical Officials, Uniform Plumbing Code} (2003).} and electrical codes,\footnote{See, e.g., \textit{Paul Rosenberg, Audel Guide to the 2002 National Electrical Code} (2004) (discussing National Fire Protection Association’s 2002 National Electric Code).} are developed by standards development organizations (SDOs).\footnote{Codes like the National Electric Code, supra note 11, are very often developed by private SDOs and adopted into law by local governments. See \textit{Allied Tube & Conduit v. Indian Head}, 486 U.S. 492, 495 (1988) (“A substantial number of state and local governments routinely adopt [NFPA’s National Electric Code] into law with little or no change . . . ”). As such, petitioning before the SDO itself during the development process is not immunized under \textit{Noerr-Pennington}. \textit{Id.} at 509–10. For an explanation of the \textit{Noerr-Pennington} Doctrine and its implications in this context, see infra Part I.B.} The standards these organizations create assure us that our houses, when properly built under the relevant codes, will not burn down because the electrician used non-standard wiring\footnote{See, e.g., \textit{Building Officials and Code Administrators International, BOCA National Building Code} (1999). Much like NFPA’s National Fire Code, discussed supra note 12, the BOCA} or fall down because the engineer employed non-standard load calculations.\footnote{See supra note 3.} Standards-setting can make
being a consumer easier and, in many respects, safer.\textsuperscript{15} The process by which such standards are developed in the United States is unique in that it is largely and increasingly conducted by private organizations, not governmental agencies.\textsuperscript{16} Despite an increasing trend toward private-sector standards development, the government continues to retain a significant stake in the standards ultimately adopted.\textsuperscript{17} Senator Leahy, co-sponsor of the Standards Development Organization Advancement Act of 2004, explained: “\textquotedblleft[r]ather than Government overregulation of technical standards, SDOs promulgate guidelines that frequently are then adopted by State and Federal governments.”\textsuperscript{18} Much like consumers, the government may derive considerable benefit from the adoption of standardized technology.\textsuperscript{19}

This Note examines SDOs through the lens of the most recent developments in Congress and the Federal Trade Commission (FTC).\textsuperscript{20}
First, in Part I, it discusses the form and function of the typical private-sector SDO and illustrates the various types of standards that such organizations develop. Drawing on the underlying policies behind our patent system and the nuts and bolts of our antitrust laws, it highlights the dangers to competition and the significant potential disincentives for innovation that the adoption of standards carries with it.22 Part II, employing the tools laid out in the previous section, illustrates what I call the “problem of incentives.”23 To this end, the FTC’s recent Union Oil Co. of California (Unocal)24 decision and its pending Rambus25 action are discussed in some detail. Part III of this Note explores a possible alternative to the too-frequent use of private SDOs. This alternative suggests that the use of SDOs in industries that do not require standards-setting (those characterized by strong network effects) should be eliminated through firm application of the antitrust laws.26 Where a standard will likely be reached without consensus standards development, forbearance is a better solution. Outside of such contexts, however, and particularly in the realm of safety standards, the great utility of the SDO concept is measured in lives saved;27 forbearance could scarcely be


21. See infra Part I.A.
22. See infra Parts I.B and I.C.


26. See infra Part III.A.
27. See FEDERAL EMERGENCY MANAGEMENT AGENCY, A PROFILE OF FIRE IN THE UNITED STATES 4 (12th ed. 1998) (“fires resulted in 4,035 civilian deaths and 23,100 injuries”), available at

https://openscholarship.wustl.edu/law_lawreview/vol84/iss1/5
considered an alternative. The “problem of incentives” remains, but the potential human costs that may attend a failure to adopt adequate safety standards leads to a potential compromise: legislatures could depute already extant SDOs to do the heavy lifting of standards development. While there would arguably be an economic price tag on doing so, such action may lend SDOs the quasi-legislative status required to make the Noerr-Pennington Doctrine applicable to lobbyists before them. The Noerr-Pennington Doctrine provides certain immunities from the antitrust laws for actions taken by competitors to seek advantage through legislative processes. Allowing open competition would certainly increase the investigatory burden placed upon the quasi-legislative SDO in determining a “best” standard, but it offers the prospect of an economic incentive for innovation. Finally, in Part IV, this Note briefly revisits Unocal and Rambus, concluding with a discussion of the obstacles that lie in the path to a system, similar to the one here suggested, in which innovation is properly rewarded.

I. THE STANDARD DEVELOPMENT ORGANIZATION

A. Standards-setting and the role of SDOs

It comes as no surprise to any of us that lumber stores, whether in Maine or Mississippi, carry plywood that is eight feet by four feet in a number of uniform thicknesses, or that a bolt purchased at a hardware store in Tacoma matches precisely a nut purchased at another in Topeka. The size of lumber and the thread alignment on a bolt are each governed by a standard: “a set of characteristics or quantities that describes

http://www.usfa.fema.gov/downloads/pdf/publications/fa-214.pdf. The trend, however, is toward decreased numbers of fires and fire injuries. Id. at 3.

28. See infra Part III.B.
29. For a fuller explanation of the Noerr-Pennington Doctrine and its applicability in this context, see infra Part II.B.
30. See infra notes 52–64 and accompanying text.
31. ABA HANDBOOK ON STANDARDS SETTING, supra note 2, at 1.
features of a product, process, service, interface, or material.”

The United States does not have a single administrative body responsible for determining the thread design on a bolt or the size of a sheet of plywood. Instead, numerous groups, both public and private, create industry standards. Private standards development organizations often either fall under the umbrella of a larger standards organization (such as the American National Standards Institute or the International Standards Organization), or are themselves small industry consortia formed for the purpose of setting standards in a highly dynamic industry. In any event, SDO members collaborating to create a particular standard are very often “industry participants;” that is, they are competitors who are highly interested in the product of the SDO’s effort. The private SDO, which by its nature sits competitors in an industry across the table,

33. ABA HANDBOOK ON STANDARDS SETTING, supra note 2, at 1 (citing NATIONAL RESEARCH COUNCIL, STANDARDS, CONFORMITY ASSESSMENT, AND TRADE: INTO THE 21ST CENTURY 9 (1995)).

34. Cf., e.g., NIST SPECIAL PUBLICATION 891, STANDARDS SETTING IN THE EUROPEAN UNION 16 (1997), available at http://ts.nist.gov/ts/htdocs/210/gsig/staneu.pdf (describing the European Union’s old approach to standards setting as having relied upon the national standards development bodies of member states to inform the EU Commission of proposed draft standards or amendments to facilitate coordination). The EU’s “New Approach to Technical Harmonization” is more closely akin to the U.S.’s reliance upon private standards development organizations. See id. at 18. See supra note 9.


38. See ABA HANDBOOK ON STANDARDS SETTING, supra note 2, at 23.

39. See, e.g., Union Oil Co. of Cal., Docket No. 9305, 21–22 (F.T.C. Nov. 25, 2003) (initial decision), http://www.ftc.gov/os/adpro/d9305/031125alsj initialdecision.pdf. Where a standard overlaps with an existing patent, the patent-holder may earn substantial profit from licensing fees. Id. at 22 (“Were Unocal to receive a 5.75 cents per gallon royalty on all gallons of ‘summertime’ CARB RFG produced annually for the California market, this would result in an estimated annual cost of more than $500 million.”). See also generally Michael G. Cowie & Joseph P. Lavelle, PATENTS COVERING INDUSTRY STANDARDS: THE RISKS TO ENFORCEABILITY DUE TO CONDUCT BEFORE STANDARD-SETTING ORGANIZATIONS, 30 Amer. Intell. Prop. L. Ass’n. Q. J. 95 (2002) (offering a general review of the relevant legal issues for patent holders, SDOs, and SDO participants in the standard-setting context).
from one another to discuss the direction that the industry as a whole should take, should ring alarm bells in any antitrust student’s head.41

B. Antitrust Law Applied to the SDO Construct

SDOs have come under increased scrutiny in recent years, both by the FTC and by Congress. Despite a number of antitrust actions in the courts relating to alleged misconduct involving SDOs and their participants’ behavior,42 Congress has embraced the SDO concept for the recognized benefits of adopted standards.43 Both Congress and the FTC have sought to increase consensus standards-development while recognizing the potential for abuse that attends any such collaboration among competitors.44 Congress, through passage of the Standards Development Organization Advancement Act (SDOAA), sought to protect SDOs from frivolous litigation that would discourage these typically non-profit organizations from engaging in the standards-setting process.45 Underlying this desire to protect SDOs from unnecessary inclusion in antitrust suits was a desire to “encourage the development and promulgation of voluntary consensus standards.”46 The SDOAA, however, is aimed at the standards development organizations themselves and not at SDO participants.47

44. Ashton, supra note 19, at 1517 (noting the risk that standard adoption may “help protect the market position of existing producers); Michael Goldenberg, Standards, Public Welfare Defenses, and the Antitrust Laws, 42 BUS. LAW. 629, 631 (1987) (discussing similar anticompetitive consequences to standards development); Grindley et al., supra note 41, at 1; LeCraw, supra note 4, at 519 (concluding, among other things, that the high usage of standards in concentrated industries may stem from the “desire of the firms . . . to use product standards to entrench, extend and exploit their market power”).
47. See 15 U.S.C.A. §§ 4301–05 (2004). In its findings, Congress noted that “[p]rivate developers of the technical standards that are used as Government standards are . . . vulnerable to being named as codefendants in lawsuits even though the likelihood of their being held liable is remote
SDO participants' actions may, in appropriate circumstances, implicate sections 1 or 2 of the Sherman Act, among other competition laws, depending in large part upon who is setting the standard. Section 2 liability may arise, for example, in the case of a unilaterally set standard, such as the emergence of the Windows operating system's dominance in the PC market. Either section 1 or section 2 liability may arise in the context of consensus standards-setting, with its constant threat of collusive or exclusive behavior by and among competitors.

Participants may be immune from these provisions under the Noerr-Pennington Doctrine in certain circumstances if the standards development organization is itself a legislative body. The Noerr-Pennington Doctrine in most cases, and they generally have limited resources to defend themselves in such lawsuits.”

The Act provides a number of protections in return for fairly minimal filing requirements. In particular, the Act requires that an SDO file a written notification of “(A) the name and principal place of business of the standards development organization, and (B) documents showing the nature and scope of such activity.” In addition, in order to obtain the protections of the Act, an SDO is required to file updates as this information changes. In return for this fairly minimal filing, the Act provides a rule of reason standard of review for all alleged violations by an SDO. (conduct “shall not be deemed illegal per se; such conduct shall be judged on the basis of its reasonableness, taking into account all relevant factors affecting competition, including, but not limited to, effects on competition in properly defined, relevant research, development, product, process, and service markets”). The Act allows only actual, rather than treble, damages, in actions against SDOs, and preempts state antitrust laws in this respect. Arguably the Act’s most important provision for discouraging the unnecessary inclusion of SDOs in antitrust litigation is the institution of a loser-pays rule. SDOs may recover their costs, including attorneys fees, “if the claim, or the claimant’s conduct during the litigation of the claim, was frivolous, unreasonable, without foundation, or in bad faith.”

The broad language of the Federal Trade Commission Act’s section 5, for example, may encompass a wide variety of offenses. See FTCA, 15 U.S.C. § 45 (2000) (“Unfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce, are hereby declared unlawful.”).

See ABA HANDBOOK ON STANDARDS SETTING, supra note 2, at 6, 15.

See id. at 15. For example, an organization of professionals cannot institute ethics standards that require competition only on the basis of non-price qualities, even if ostensibly it is in the public’s interest that they do so. Nat’l Soc’y of Prof’l Eng’rs v. United States, 435 U.S. 679, 695–96 (1978). The rules the Society adopted ostensibly regarded competitive bidding as a threat to building quality, and thus “contrary to the public interest.” Id. at 685. “[T]he Society’s Board of Ethical Review has uniformly interpreted the ‘ethical rules against competitive bidding for engineering services as prohibiting the submission of any form of price information to a prospective customer which would enable that customer to make a price comparison on engineering services.’” Id. at 683. The Court viewed this elimination of competitive bidding as no more than an elimination of competition itself, and therefore found a violation of section 1 of the Sherman Act. Id. at 695–96.

See infra notes 56–58 and accompanying text (explaining the three bases for the doctrine as articulated in Noerr). The basis for the Noerr-Pennington Doctrine is, at best, muddled. Confusion as
permits competitors to seek advantages through “legislation, adjudication, or executive and administrative machinery” by attempting to influence governmental proceedings. The Doctrine rests upon the Supreme Court decision in *Noerr Motor Freight*. The Court there articulated three separate bases for its decision. The Court found that regulation of political activity was not the purpose of the Sherman Act; that representative democracy requires participation by constituents; and, lastly, that the Act should be read to avoid implicating First Amendment questions. Accordingly, the Court found no liability under the Sherman Act.

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53. AREEDA & HOVENKAMP, supra note 8, at 146.

54. E. R.R. Presidents Conference v. Noerr Motor Freight, Inc., 365 U.S. 127 (1961). The rise of the trucking industry in competition with railroads after World War II caused the railroads to recognize “the struggle as one of economic life or death for their method of transportation.” Id. at 128–29. The railroads’ presidents organized the Eastern Railroad Presidents Conference, which in turn launched a publicity campaign to tarnish the public image of the trucking industry and encourage legislation detrimental to the trucking industry. Id. at 129. Although the lower courts found the campaign to be a violation of the Sherman and Clayton Acts, the Supreme Court reversed. See *Noerr Motor Freight, Inc. v. E. R.R. Presidents Conference*, 155 F. Supp. 768 (E.D. Pa. 1957); *Noerr Motor Freight, Inc. v. E. R.R. Presidents Conference*, 273 F.2d 218 (3d Cir. 1959); *Noerr*, 365 U.S. 127. The Court found no Sherman Act liability for the Conference on the theory that [a] construction of the [Act] that would disqualify people from taking a public position on matters in which they are financially interested would thus deprive the government of a valuable source of information and, at the same time, deprive the people of their right to petition in the very instances in which that right may be of the most importance to them. *Noerr*, 365 U.S. at 139.


56. *Noerr*, 365 U.S. at 140–41 (“Insofar as that Act sets up a code of ethics at all, it is a code that condemns trade restraints, not political activity, and ... a publicity campaign to influence governmental action falls clearly into the category of political activity.”).

57. Id. at 137. The Court stated: In a representative democracy. . .[the political branches] of government act on behalf of the people and, to a very large extent, the whole concept of representation depends upon the ability of the people to make their wishes known to their representatives. To hold that the government retains the power to act in this representative capacity and yet hold, at the same time, that the people cannot freely inform the government of their wishes would impute to the Sherman Act a purpose to regulate, not business activity, but political activity, a purpose which would have no basis whatever in the legislative history of that Act.

58. Id. at 138 (“The right of petition is one of the freedoms protected by the Bill of Rights, and we cannot, of course, lightly impute to Congress an intent to invade these freedoms.”).
Act for the defendant’s “‘vicious, corrupt and fraudulent’” campaign to discredit a competitor, “at least insofar as those activities comprised mere solicitation of governmental action with respect to the passage and enforcement of laws.” In *United Mine Workers v. Pennington*, the case that provided the second half of the Doctrine’s name, the Court applied *Noerr* immunity to attempts to influence public officials acting not as rule-makers, but as purchasers. *Noerr* immunity also applies outside of the legislative process, but is somewhat more limited. For example, although *Noerr* teaches that “unethical political conduct in the legislative context is irrelevant for antitrust purposes,” such conduct is not condoned in an adjudicatory process.

59. Id. at 129.
60. Id. at 138.
61. United Mine Workers of America v. Pennington, 381 U.S. 657 (1965). In *Pennington*, a number of large coal companies, facing overcapacity, had entered an agreement with the unions to raise minimum wage, thereby driving smaller, less mechanized mines out of business. Id. at 660. The higher production costs associated with these higher wages were to be demanded by workers in mines across the industry, irrespective of the mine’s ability to pay. Id. The Sherman Act § 1 charges related to the successful effort by large coal companies and labor unions to have the Secretary of Labor raise the minimum wage requirement for mine workers of firms selling coal to the Tennessee Valley Authority. Id. at 659–60. In what is now a too-broad reading of *Noerr*, Justice White wrote that *Noerr* “shields from the Sherman Act a concerted effort to influence public officials regardless of intent or purpose.” Id. at 670. *Pennington* also offered the important alternate holding that the Sherman Act damages were unavailable to the plaintiff under *Noerr* because the injury suffered was caused by the Secretary of Labor. Id. at 671.

62. The filing of lawsuits, for example, is immune from antitrust prosecution unless the lawsuits are “objectively baseless.” *Prof’l Real Estate Investors v. Columbia Pictures Indus.*, 508 U.S. 49, 60 (1993). Justice White affirmed the lower court’s grant of summary judgment as it reasonably found that the defendant’s lawsuits were an “objectively plausible effort” to enforce its rights.) Id. at 65. *Professional Real Estate Investors* illustrates what is referred to as the “sham exception” to the *Noerr-Pennington* Doctrine. Id. at 60. This exception withholds immunity from conduct that uses the adjudicatory process, as opposed to the result, to harm a competitor. Id. at 60–61. The Court regards as sham “private action that is not genuinely aimed at procuring favorable government action,” as opposed to actions that are “a valid effort to influence government action[].” Id. at 58 (quoting *Allied Tube & Conduit v. Indian Head, Inc.*, 486 U.S. 492, 500 n.4 (1988)). In *Professional Real Estate Investors*, the Supreme Court affirmed the Court of Appeals finding of probable cause for the underlying lawsuit, thereby taking the litigation out of the sham exception and placing it squarely inside of *Noerr*. Id. at 65–66.

64. *Cal. Motor Transp.*, 404 U.S. at 513 (“Misrepresentations . . . are not immunized when used in the adjudicatory process.”). The primary distinction between the legislative process and the adjudicatory process is legislatures’ greater ability to root out falsehoods. *Clipper Exxpress v. Rocky Mountain Motor Tariff Bureau*, 690 F.2d 1240, 1261 (9th Cir. 1982). The Ninth Circuit, relying upon *Cal. Motor Transp.*, noted that

the adjudicatory sphere is much different from the political sphere. There is an emphasis on debate in the political sphere, which could accommodate false statements and reveal their falsity. In the adjudicatory sphere, however, information supplied by the parties is relied on as accurate for decision making and dispute resolving. The supplying of fraudulent information

https://openscholarship.wustl.edu/law_lawreview/vol84/iss1/5
C. Background of the “Problem of Incentives”: Advantages and Disadvantages of Using the SDO Model

In passing the SDOAA, Congress neglected the motivating force behind SDOs: the participants who bring their innovations and know-how to the table. SDOs themselves are not innovators; rather, they are synthesizers of already-extant information. Were SDO participants wholly to reject the standards-setting process because it carries little benefit for them, SDOs would be unable to function. This “Chicken Little” scenario is unlikely to occur; the huge number of existing standards reflects their popularity among manufacturers who realize some cost savings by utilizing the standards-setting process. This cost savings, passed on to consumers, lends support for retaining some industry standards. The advantages, however, may be overstated. Countervailing arguments include the risks of premature standard-selection and what I call the “problem of incentives.”
1. Premature Standard Selection

The dangers that attend premature standard selection are the same dangers that attend any “incorrect” decision under the theory of path dependence. 70 The theory posits that a standard chosen too early would preclude potentially superior technologies before they have had an opportunity to develop. 71 If the costs associated with later “switching paths” are greater than the difference in benefit realized between the two paths, the market will not switch to the superior technology. 72 Demonstrably superior products may never show up in the marketplace. Oft-cited examples are the VHS/Beta battle in which VHS, a technology some have viewed as inferior to Beta, won, 73 and the lock-in of the

70. A leading theorist uses the simple example of a sudden introduction of automobiles to an island. W. BRIAN ARTHUR, Competing Technologies, Increasing Returns, and Lock-In by Historical Small Events, in INCREASING RETURNS AND PATH DEPENDENCE IN THE ECONOMY 13, 14 (1994). Drivers may choose to drive on the left side of the road or the right side of the road. “[A]s a higher proportion of drivers chooses one side, the payoff to choosing that side rapidly rises.” Id. at 14. Ultimately, the cost of changing sides (that is, a head-on collision) will be too great and the “path” will have been determined. Id. Everyone will drive on the same side. The more complicated issue involves the unknown and small events that, though unpredictable beforehand, may ultimately determine the outcome: “drivers’ reactions, dogs running into the road, the timing or positioning of traffic lights.” Id. Along these lines, many commentators have argued that we have been left with the wrong kinds of products in the marketplace, such as the QWERTY keyboard, because of what amounts to historical accident. David A. Weisbach, Thinking Outside the Little Boxes: A Response to Professor Schlunk, 80 TEX. L. REV. 893, 899–900 (2002) (describing one explanation of why the inefficient QWERTY design remains dominant today). But see S.J. Liebowitz & Stephen E. Margolis, The Fable of the Keys, J. L. & ECON. 1 (1990) (criticizing the path dependence argument as applied to the development of the QWERTY keyboard). The most common such story is that of the VHS format’s triumph over Beta. Bradley H. Weidenhammer, Capatability and Interconnection Pricing in the Airline Industry: A Proposal for Reform, 114 YALE L.J. 405, 411 n.22 (2004). For more on path dependence, see Joseph Farrell & Garth Saloner, Standardization, Compatability, and Innovation, 16 RAND J. ECON. 70 (1985).

71. See id.

72. The simple path dependence example provided in note 70 assumes that neither the left side of the road nor the right side of the road is a “better” choice. See ARTHUR, supra note 70, at 14. However, what if it were true that right-side drivers, as a group, arrive at their destinations 5% more slowly than left-side drivers? Were this scenario to play out naturally, more drivers would realize the advantage to driving on the left and, because of the increasing return, left-side driving would become the standard. It would become “locked-in.” Id. But what if, because of “drivers’ reactions, dogs running into the road, the timing or positioning of traffic lights,” events that may be termed historical accidents, right-side driving were “chosen” instead? This is, or should be, a concern about standards adoption in those industries characterized by network effects. While interoperability provides significant benefit to consumers, the preclusion of potentially superior technologies is a serious risk when choosing a standard. See supra note 15.

QWERTY keyboard. The premature selection of the inferior technology or process creates initial conditions that preclude later adoption of superior technology. The same may hold true for standards.

2. Introducing the Problem of Incentives

Neither Congress nor the FTC has examined the problem of standards-setting from the perspective of the would-be SDO participants. Indeed, a significant cost associated with the standards-development process, what I call “the problem of incentives,” has not been placed into the balance by commentators or courts. The problem may be stated simply: profit-seekers must be provided incentives for their efforts.

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75. See ARTHUR, supra note 70, at 14.

76. See id. at 26 (citing Farrell & Saloner, supra note 70). The author argues that “early adopters are affected by the choices of later adopters,” which may compel a choice based upon “expectations of what is likely to prevail, even if founded on very little . . .” Id.

77. Commentators, however, have indirectly addressed the problem. See, e.g., Janice M. Mueller, *Patent Misuse Through the Capture of Industry Standards*, 17 BERKELEY TECH. L.J. 623 (2002) (discussing the problems that may arise where holder of a patent covering the consensual standard refuses to license).

78. See discussion of Unocal and Rambus, infra Parts II.A–C. Courts typically look to “whether the questioned practice imposes an unreasonable restraint on competition, taking into account a variety of factors, including specific information about the relevant business, its condition before and after the restraint was imposed, and the restraint’s history, nature, and effect.” State Oil Co. v. Kahn, 522 U.S. 3, 10 (1997). See also James J. Anton & Dennis A. Yao, *Standard-Setting Consortia, Antitrust, and High-Tech Industries*, 64 ANTITRUST L.J. 247, 251 (1995) (The approach to standards-setting “activities under the rule of reason is to inquire whether the restraint is likely to have anticompetitive effects and, if so, whether the [activity] is reasonably necessary to achieve procompetitive benefits that outweigh those anticompetitive effects.”) (internal quotation marks omitted). This analysis could encompass the most troubling aspect of Unocal and Rambus, the disincentive to innovation, but has not yet done so.

79. U.S. CONST. art. I, § 8, cl. 8. Article I of the U.S. Constitution authorizes Congress “[t]o 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[,]” Id. Although the Founders clearly believed that an intellectual property protection system would promote innovation, other claimed justifications for U.S. intellectual property laws are numerous and varied. For example, rationales for patent protection include:

1. “Invention Motivation”: patent protection allows appropriability and internalizes externalities
2. “Invention Dissemination”: patent protection encourages wider disclosure and use of inventions
3. “Invention Commercialization”: patent protection induces development and commercialization of non-commercial inventions
4. “Orderly Cumulative Development of Inventions”: patent protection assures orderly development of inventions which are cumulative

generally speaking, not vehicles for beneficence.  

Research and development costs vary, but in many industries are extraordinarily high. Research is undertaken, however, because the market rewards innovation with the possibility of monopoly profit. The United States does this by offering patent owners a government-sanctioned, limited-term right to exclude others from producing or selling a patented technology. This assures the holder of a valuable patent significant profit during this limited term. In return for this assurance, the technology becomes publicly

available at http://www.ftc.gov/opp/intelect/020226robertstoner.pdf. Most prevalent, however, is the innovation-promotion notion that we see in the Constitution. The FTC, for example, notes that patent rights allow firms “to increase their expected profits from investments in research and development, thus fostering innovation that would not occur but for the prospect of a patent.” FEDERAL TRADE COMM’N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 2 (2003), available at http://www.ftc.gov/os/0223/10/innovationrpt.pdf [hereinafter FTC Innovation Report].


Much expense is incurred in the early phases of development of compounds that will not become approved drugs. In addition, it takes about 7 to 10 years and an average cost of 500 million dollars to develop each new drug. The money is spent before the FDA approves the drug, and if the drug is not approved, the company loses the money.


83. A patent is “a grant to the patentee . . . of the right to exclude others from making, using, offering for sale, or selling the invention . . . .” 35 U.S.C. § 154(a)(1) (2000).

84. See Giles S. Rich, The Relation Between Patent Practices and the Anti-Monopoly Laws, 14 FED. CIR. B. J. 5 (2004–2005). Note that there is a distinction between a patent and what is commonly referred to as a monopoly. “Ask the average man whether ‘monopoly’ is bad and he will undoubtedly tell you it is. Ask him why and he will say that monopolies gouge the public. To talk of the ‘patent monopoly’ weds patents to prejudice, which is not conducive to clear thinking.” Id. at 8. Indeed, both the legal kind conferred by a grant of patent and the illegal kind that the word may conjure up for Rich’s “average man” both fit neatly into the definition of “monopoly”: “[T]he market condition existing when only one economic entity produces a particular product or provides a particular service.” BLACK’S LAW DICTIONARY 1028 (8th ed. 2004).
available after the term expires and may be produced by others without penalty. The monopoly profits and licensing fees that can be realized during the limited-term right to exclude are a very strong incentive towards innovation and invention. Consumers tolerate the anticompetitive effects of excluding everyone but the patent-holder because the consumer may ultimately benefit from new technology.

II. THE PROBLEM OF INCENTIVES: WHAT’S A FIRM TO DO?

A. Unocal: Initial Decision

The recent Unocal decision by the FTC illustrates how the standards-development process places these rewards at risk. In its first iteration, Unocal came before Administrative Law Judge (ALJ) Michael Chappell on motions to dismiss, most notably for present purposes on the basis of Noerr-Pennington immunity. The allegations arose from Unocal’s participation in setting a California standard for the manufacture of Reformulated Gasoline (RFG). The California Air Resources Board (CARB), a department of the California Environmental Protection Agency, was charged with

There are clear distinctions, of course, between a monopoly and the rights conferred by a patent to exclude others from making, using, selling, or offering to sell an invention. One is that a patent only excludes others from employing “a certain solution, though not all solutions to a given problem.” DONALD S. CHISUM, PRINCIPLES OF PATENT LAW 57 (3d ed., 2004). Additionally, a monopoly, unlike a patent, implies the possession of market power. Indeed, the “average patent . . . confers too little monopoly power on the patentee in meaningful economic sense. . .and sometimes it confers no monopoly power at all.” WILLIAM M. LANDES AND RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 374–75 (2003). However, neither distinction is relevant here. In the SDO context, the adopted technology, if covered by an existing patent, generally will confer monopoly power to the patent-holder. Other solutions, if any exist, are typically excluded by the adoption of the standard.

85. 35 U.S.C. § 154(a)(2) (2000). A patent is valid for twenty years. Id. At the expiration of this term, the patent-holder loses its right to exclude others from making, using, or selling the invention. See id.

86. See FTC Innovation Report, supra note 79, at 2.

87. Brenner v. Manson, 383 U.S. 519, 534–35 (1966) (“The basic quid pro quo contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial utility.”).


90. Id. at 1. The market power question addressed in Unocal is beyond the scope of this paper.

91. Id. at 2–3.
determining “cost-effective regulations and standards governing the composition of low emissions” RFG. Unocal recognized that an overlap between its own patents and the new CARB regulations could be highly advantageous. Unocal had a pending patent application relating to its 5/14 Project, which involved a formula for calculating emissions levels in gasoline based upon its chemical composition. Seeking to profit from a potential overlap between its patent and the standard for RFG, Unocal did not disclose the patent application in its communications with CARB. Rather, in a letter to CARB, Unocal stated: “Please be advised that Unocal now considers this data to be nonproprietary and available to CARB, environmental interests, groups, and members of the petroleum industry, and the general public upon request.”

CARB used Unocal’s data from the 5/14 Project to set certain RFG specifications. Ultimately, five of Unocal’s eight variables from its equations were incorporated into CARB’s model; of these, the T50 variable was exclusively introduced by Unocal. The Patent and Trademark Office accepted Unocal’s 5/14 Project patent application in July 1992. After California refiners “invested billions of dollars in sunk capital investments” to make the CARB standard RFG, Unocal undertook efforts to enforce its patents. The FTC alleged that Unocal would reap $500 million in licensing fees from its actions.

In the initial decision, Administrative Law Judge Chappell held, inter alia, that CARB’s standards development activities were quasi-legislative in nature. As such, because “[c]ase law interpreting Noerr-Pennington

92. Id. at 15 (internal quotation marks omitted).
93. Id. at 16.
94. Id. at 14. Unocal’s scientists had discovered the “directional relationships between eight fuel properties—RVP, T10, T50, T90, olefin content, aromatic content, paraffin content, and octane—and three types of tailpipe emissions—i.e., incompletely burned or unburned hydrocarbons, carbon monoxide, and nitrogen oxides.” Id. Using the level of these eight fuel properties in a particular batch of gasoline, the formula would calculate the level and type of emissions that would be produced. This would have fulfilled the “cost-effective” mandate under which CARB was working. See id. at 15.
95. Id. at 15.
96. Id. at 17.
97. See id. In particular, CARB used the equations to set its T50 specification. Id.
98. See id. at 17–18.
99. Id. at 21.
100. Id. at 22.
101. Id.
102. Whether CARB was a quasi-legislative (as opposed to quasi-adjudicatory) body determined, under the Noerr-Pennington Doctrine, whether Unocal’s activities were immune from antitrust prosecution. Id. at 32. “‘[U]nethical conduct in the setting of the adjudicatory process often results in sanctions’ and . . . ‘misrepresentations, condoned in the political arena, are not immunized when used in the adjudicatory process.’” Id. (quoting Prof’l Real Estate Investors v. Columbia Pictures Indus.,
allows deliberate deception in a legislative proceeding where the agency is not solely dependent on the petitioner for information,” Unocal’s actions fell within the Noerr-Pennington Doctrine. Unocal’s conduct thus was “political petitioning behavior[]” immune from antitrust liability.

B. Unocal: Opinion of the Commission

The Commission, on appeal from the ALJ’s dismissal of the case against Unocal on Noerr-Pennington grounds, flatly rejected the application of the Noerr-Pennington Doctrine to the CARB-Unocal relationship. Having first dismissed the Supreme Court’s Noerr jurisprudence as “unsettled,” the Commission found the majority of circuits hold that “in some contexts misrepresentations to government may vitiate Noerr-Pennington protection.” Citing California Motor Transport v. Trucking Unlimited, Allied Tube & Conduit v. Indian Head, and Walker Process Equipment v. Food Machinery & Chemical, along with a number of lower court decisions, the Commission concluded that “the fabric of existing law is rich enough to extend antitrust coverage, in appropriate circumstances, to anticompetitive conduct flowing from deliberate misrepresentations that undermine the legitimacy of government proceedings.”

This much is not revolutionary. However, the Commission, focusing upon the Supreme Court’s statement that the “applicability of Noerr-Pennington varies with the context and nature of the activity,” rejected

508 U.S. 49, 61 n.6 (1993)). For a discussion of the Doctrine’s varying applicability under the current law depending upon the nature of the proceeding, see supra Part I.B.

103. Id. at 47 (finding that Unocal’s conduct “did constitute political petitioning behavior[,]” which is immune under Noerr-Pennington from antitrust liability).

104. Id. at 56.

105. See infra Part I.B.


108. Id. at 16.

109. Id. at 17.


114. Numerous Courts of Appeal have found a misrepresentation exception to the Noerr-Pennington Doctrine. See id. at 16–17 (compiling cases).

115. Id. at 30 (citing Allied Tube, 486 U.S. at 499).
the Unocal initial decision’s reading of the misrepresentation exception as limited to adjudicatory proceedings.\textsuperscript{116} Instead, the Commission employed a four-factor test to the FTC’s allegations to determine the nature and context of the proceeding.\textsuperscript{117} First, the Commission concluded that CARB, although a rule-making arm of the California EPA, had an expectation of honesty from participants.\textsuperscript{118} It was forced to rely upon the participants’ factual assertions.\textsuperscript{119} CARB’s mandate to institute “maximum feasible reductions” in pollutants and “the most cost-effective combination of control measures”\textsuperscript{120} was found to limit its discretion in standards setting.\textsuperscript{121} Citing these three factors, the Commission held that the policy concerns underlying Noerr were not implicated by refusing its application to Unocal’s conduct.\textsuperscript{122} The Commission thus formulated a new test for application of Noerr to bodies not purely legislative.\textsuperscript{123} Unocal, in its conduct before CARB, may well have failed that test.

The ultimate outcome is an unhappy one for Unocal. Through this broad reading of the sham or misrepresentation exception to Noerr-Pennington, the company may be offered nothing for its trouble in developing its T50 technology.\textsuperscript{124} CARB, by its own admission, would have written the standard to avoid overlap with Unocal’s T50 patent if it had known of the patent’s existence.\textsuperscript{125} Yet, in failing to fully disclose the existence of the patent and its intent to prosecute it, Unocal now faces disgorgement of the profits it obtained and, potentially, treble damages.\textsuperscript{126} This award could reach many millions or even billions of dollars.\textsuperscript{127}

\begin{itemize}
\item \textsuperscript{116}Id. at 31.
\item \textsuperscript{117}See id. at 32–35. These are: (1) whether the body had an expectation of truthful representation; (2) the degree of discretion the body possessed in its decision-making capacity; (3) the extent of the body’s need to rely upon participants’ factual assertions; and (4) the post-hoc ability of a tribunal to determine whether a given misrepresentation actually caused the decision in question. Id.
\item \textsuperscript{118}Id. at 37–39.
\item \textsuperscript{119}Id. at 41–42.
\item \textsuperscript{120}Id. at 39 (internal quotations and citation omitted).
\item \textsuperscript{121}Id. at 39–41.
\item \textsuperscript{122}Id. at 43–45.
\item \textsuperscript{123}Id. at 55.
\item \textsuperscript{124}See supra Part I.C.2.
\item \textsuperscript{125}Union Oil Co. of Cal., Docket No. 9305, 7 (F.T.C. July 7, 2004) (opinion of the commission), http://www.ftc.gov/os/adpro/d9305/040706commissionopinion.pdf (“Had Unocal disclosed its proprietary interests and pending patent rights earlier, CARB would have been able to consider the potential costs imposed by the Unocal patents . . .”).
\item \textsuperscript{126}The FTC decision was a reinstatement of the antitrust action against Unocal, originally dismissed by the ALJ on Noerr-Pennington immunity grounds. See id. at 54. Any remedy is still some time away. However, common remedies include disgorgement or an award of treble damages. A decision finding Unocal liable for an antitrust violation would likely see its current licensees, those oil refiners that installed billions of dollars in capital investments in their refineries, filing additional actions against Unocal for damages. For example, in Rambus, discussed infra Part I.L.C, the FTC
\end{itemize}
C. Rambus

In Rambus, the Administrative Law Judge examined conduct very similar to that of Unocal, with the exception that Noerr-Pennington’s applicability was never in contention. Rambus, as a participant in the private consensus SDO Joint Electron Device Engineering Council (“JEDEC”), did not disclose its ownership of certain patents covering the dynamic random access memory (DRAM) standard ultimately adopted by the SDO. In his holding, Administrative Law Judge Stephen J. McGuire found that Rambus had no duty under JEDEC rules to disclose its intellectual property holdings, and that no other viable alternative to the Rambus technology existed at the time that the SDRAM standard was adopted. Thus, Rambus was saved for the present by sloppy internal rulemaking at the JEDEC and by its own superior product. Although it is unclear from the Initial Decision whether the JEDEC would have adopted Rambus’s patented technology had it been aware of the patents,
it seems clear that disclosure would likely have threatened Rambus’s potential profits from its patented technology.\textsuperscript{136}

\section*{D. Unocal and Rambus Illustrate a Systemic Problem}

\textit{Rambus} and \textit{Unocal} together illustrate the problem of incentives. Our patent system rewards innovation by allowing a firm awarded a patent to exclude others from using the patented process or technology.\textsuperscript{137} The patent holder, either through licensing or directly employing its patent, may realize substantial economic gain.\textsuperscript{138} Indeed, much of our economic law is intended to encourage innovation and risk-taking.\textsuperscript{139} Leaving aside for the moment the arguably unethical conduct of Unocal, the standards development process for reformulated gasoline in California was destined to preclude the company or any other similarly situated firm from obtaining significant profit from its research.\textsuperscript{140} Given the tightening of SDO patent-disclosure rules that will inevitably take place post-\textit{Rambus},\textsuperscript{141} the disincentives for innovation will be at least as great in the private SDO context.\textsuperscript{142}

\footnote{7. 2004) (opinion of the commission), http://www.ftc.gov/os/adpro/d9305/040706commission\ opinion.pdf (“Had Unocal disclosed its proprietary interests and pending patent rights earlier, CARB would have been able to consider the potential costs imposed by the Unocal patents.”).}

\footnote{136. Rambus, Inc., Docket No. 9302, 205 (F.T.C. Feb. 23, 2004) (initial decision), http://www.ftc.gov/os/adpro/d9302/040223initialdecision.pdf (“Even Assuming That Alternatives Did Exist, JEDEC Would Not Have Rejected the Rambus Technologies.”). However, the ALJ then went on to describe the possibilities that stood before JEDEC if disclosure had been made. \textit{Id.} at 319. Had Rambus disclosed its patents and refused to give an assurance before adoption that it would not enforce the patents, “if there were no ex ante negotiations, JEDEC could have . . . adopted different standards.” \textit{Id.}}

\footnote{137. \textit{See supra} note 79.}

\footnote{138. \textit{Id.}}

\footnote{139. \textit{See, e.g.,} Keyser v. Commonwealth Nat’l Fin. Corp., 675 F.Supp. 238, 257 & n.22 (M.D. Pa. 1987) (citing \textit{Weiss v. Temporary Inv. Fund}, 692 F.2d 928 (3d Cir. 1982)) (“One objective of the business judgment rule is . . . to encourage others to assume entrepreneurial and risk-taking activities by protecting them against personal liability when they have performed in good faith and with due care, however unfortunate the consequence.”). Likewise, the encouragement of innovation and invention are built into the U.S. Constitution itself. \textit{See U.S. CONST. art. I, § 8, supra note} 79. \textit{See also} 35 U.S.C. § 154(a)(2) (2002) (granting patent-holders a twenty year right to exclude others from making, using, or selling the patented invention); FTC Innovation Report, \textit{supra} note 79. This effectively acts to reward the risk of research and investment expenditures.}

\footnote{140. \textit{See generally} Part I.C.2 for a discussion of how incentives spur innovation. Removing such incentives invites decreased research and development investment.}

\footnote{141. \textit{See} Tsilas, \textit{supra} note 134 at 521 (“SDOs need to reexamine their patent policies, particularly focusing on their key patent disclosure provisions.”).}

\footnote{142. There will remain some SDOs associated with government that, under the Commission’s “context and nature” test, will offer \textit{Noerr} immunity to participants. \textit{See supra} Part II.B. \textit{Noerr} does not apply to private SDOs, however, and those like JEDEC will be permitted to require absolute honesty and forthrightness by participants on pain of antitrust scrutiny. \textit{See supra} note 29.}

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III. RESTORING THE BALANCE BETWEEN INNOVATION AND REWARD

A. If the Characteristics of the Relevant Industry Permit, Forbear

The use of SDOs in industries characterized by strong network effects should be eliminated through strict application of the antitrust laws. Where strong network effects exist in a particular industry, the market is likely to ultimately select a “best” standard. While simply disbanding SDOs in these industries is not a perfect solution, other means exist to duplicate many of the benefits of standards-setting.

For example, failure to adopt a non-safety standard may lead to a decreased level of interoperability. Interoperability, however, can be fostered instead by the concept of an open source code. While this means one thing in the context of, for example, the Linux operating system for Intel-compatible PCs, the “open source code” concept may

143. Industries characterized by strong network effects (that is, increasing returns) are more likely to reach a standard on their own. See Curran, supra note 15, at 986; see also supra Part I.C.

144. This paper does not, of course, recommend selective enforcement of the antitrust laws by the FTC. Rather, standards development should be folded into the legislative process only in those industries where standards development is necessary. See infra Part III.B. Where adoption of a standard will occur on its own (e.g., the increasing returns scenario), the SDO should not be deputed by the relevant legislature and will therefore not be immunized.

145. See supra Part I.C.1.

146. See discussion, supra note 15, of how standards make being a consumer easier and safer. The economic advantage conferred to manufacturers is also significant. See ABA HANDBOOK ON STANDARDS SETTING, supra note 2, at 10 (noting that “imperfect interoperability between software and hardware systems used by various members of the U.S. automotive supply chain results in costs of at least one billion dollars per year”) (citations omitted). Hardware/software interoperability standards are, however, numerous. See Jack E. Brown, Technology Joint Ventures to Set Standards or Define Interfaces, 61 ANTITRUST L.J. 921 (1993). If merely “imperfect” interoperability standards cause $1 billion in losses to one (albeit large) industry, interoperability standards generally create significant cost advantages.

147. ABA HANDBOOK ON STANDARDS SETTING, supra note 2, at 10. Interoperability is one of the great benefits of uniform standards. Such standards “allow interchangeability of complementary products.” Id. See also Joseph Farrell & Garth Saloner, Installed Base and Compatibility: Innovation, Product Preannouncements, and Predation, 76 AM. ECON. REV. 940 (1986).

148. RICHARD RAYSMAN, PETER BROWN, & JEFFREY D. NEUBURGER, EMERGING TECHNOLOGY: FORMS & ANALYSIS § 3.18. In their treatise on emerging technologies, the authors describe the open source approach like this: “[o]pen source software is software, the source code form of which is made available by its owner to the public under a ‘public license,’ so that the source code can be read, modified and redistributed by users, subject to certain conditions.” Id. The solution here envisioned would have manufacturers publish, if they seek the efficiencies of interoperability, the technical information required for others to integrate their own technologies with that of the manufacturer. While this would require, in many cases, licensing fees, the publication of interoperability specifications would not be obligatory.

149. Id. § 3.18. Sun Microsystem’s Linux operating system is “perhaps the most well-known open source product.” Id. For a more complete description of the development and current state of the Linux open source code operating system, see Linux.org, What is Linux, http://www.linux.org/linux/
mean something else in different industries. In addition, in some industries there is the possibility that standards will be chosen unilaterally. Unilateral standard-selection manifests in industries marked by strong network effects. Many technology industries are marked by network effects of varying strength, and in these industries it is generally unnecessary to do any standards development work to obtain interoperability.

B. Where Forbearance is Unacceptable, Make SDOs Quasi-Legislative

Of course, allowing things to sort themselves out without the benefit of a formal standard-setting process would prove unreasonable in some industries. The clearest case for retaining the standards-setting machinery is in the safety standard context. Unfortunately, few safety standards will be characterized by strong network effects. Thus, the development of particular safety technologies often will not carry sufficient economic incentives to cause one particular technology to become a unilateral standard. But these standards are extremely important: if interoperability or informational standards carry repercussions measured in dollars, failed safety standards are measured in human lives. The participation of market actors in the standards-development process is highly desirable. One of the primary advantages of allowing non-governmental SDOs to set standards is their participants’ expertise; no

150. For example, a company owning a patent in a particular connection between computer and peripheral may value interoperability over potential licensing fees. It might then offer a public license for the use of this technology. This would permit standardization but leave unharmed the incentives for innovators.
151. ABA HANDBOOK ON STANDARDS SETTING, supra note 2, at 6.
152. Id.
153. Further, it may be dangerous to do so. See supra notes 70, 72. The standards-setting process itself may be akin to Arthur’s “drivers’ reactions, dogs running into the road, the timing or positioning of traffic lights,” those external events that may cause premature selection of an “inferior” standard. See ARTHUR, supra note 70, at 14.
154. But see discussion, infra note 176, on the difficulty of separating safety from non-safety standards. While individual automobile airbags, for example, do not become more useful when more people purchase cars equipped with them, many technologies less directly related to safety may be thought of as such. Id.
155. See supra note 27.
156. See discussion of the value of interoperability standards to consumers and manufacturers, supra note 146.
157. See supra note 70.
158. See supra note 16.
existing government body has both the technical know-how and the resources to effectively decide between competing technologies.\textsuperscript{159}

Although standards-setting is a necessity in some industries and is best done by expert private market actors, allowing private SDOs to set standards endangers the participation of these very actors in the process.\textsuperscript{160} SDO participants are asked to leave their own self-interest at the door and cooperate to determine the “best” standard.\textsuperscript{161} While, on the one hand, the current body of law provides enormous economic incentives for participants to act in their own self-interest,\textsuperscript{162} it then penalizes them for doing so.\textsuperscript{163} This is wrong-headed. Firms like Unocal should realize profit when they have developed a useful process that will, for example, produce clean gasoline in the most inexpensive way.\textsuperscript{164}

Rather than permitting private SDOs to continue to dampen innovation by would-be participants, legislative bodies should depute already extant SDOs (that is, provide SDOs with rulemaking authority).\textsuperscript{165} As quasi-legislative rulemaking agencies, these SDOs should then be provided sufficient resources to do their work\textsuperscript{166} and complete immunity from antitrust prosecution.\textsuperscript{167} While the resources issue is always a concern for SDOs, more important may be their newly acquired, unquestionable quasi-legislative status.\textsuperscript{168}

Misrepresentations made while petitioning before a quasi-legislative body are, as discussed above, immunized from antitrust liability under the \textit{Noerr-Pennington} Doctrine.\textsuperscript{169} Cases like \textit{Unocal} would never be brought


\textsuperscript{160} See supra Part II.D.

\textsuperscript{161} See discussion, for example, of CARB’s reliance upon participants’ factual assertions, supra Part II.B.

\textsuperscript{162} See supra Part I.C.2.

\textsuperscript{163} See supra Parts II.A–B.

\textsuperscript{164} See supra note 94.

\textsuperscript{165} This proposal would merely cut out one step in the process: adoption in whole of the relevant standard by the legislature. See discussion supra note 12.

\textsuperscript{166} See infra note 172 for a discussion of the additional investigatory burdens that would fall upon the SDO if this system were adopted.

\textsuperscript{167} The SDOAA does not, at present, provide complete immunity to the SDOs themselves. See supra note 47.

\textsuperscript{168} See supra note 64 for a discussion of how quasi-legislative status would affect the application of the \textit{Noerr-Pennington} Doctrine to private standards-development organizations.

\textsuperscript{169} Misrepresentation before legislative bodies, discussed infra note 173, is to be distinguished from misrepresentation made before adjudicatory bodies. Even misrepresentation to an administrative agency has been found too far from the legislative, political arena to justify immunity. See Israel v. Baxter Laboratories, Inc., 466 F.2d 272, 278 (D.C. Cir. 1972) (“No actions which impair the fair and
because, under this system, Unocal would have been immune from antitrust prosecution even though it was found to have made material misrepresentations with respect to the existence of its T50 patent. Admittedly, it seems counter-intuitive to condone immunization for deceptive behavior. It is possible that the T50 standard was not the “best” standard for reformulated gasoline. However, the potential harm that can occur in such a situation relates to the conflict between the covert competitive behavior of the market participant and the expectation of honesty and forthrightness by the SDO. CARB, unlike the deputy-legislature it would become under this proposal, expected honesty and fair dealing by participants. If SDOs were deputized as quasi-legislative agencies of state or federal government, the possibility of substantial profit would again be embraced.

impartial functioning of an administrative agency should be able to hide behind the cloak of an antitrust exemption.

170. This much is made clear by Unocal. See Union Oil Co. of Cal., Docket No. 9302, 54, (July 7, 2004) (opinion of the commission), http://www.ftc.gov/os/adjpro/d9305/040706commissionopinion.pdf (vacating dismissal of the Initial Decision because “[t]he Noerr-Pennington claims cannot be sustained if the Complaint’s allegations are taken as established”).

171. Immunity under Noerr-Pennington clearly extends into the realm of misrepresentations made in the political arena. Cal. Motor Transp. v. Trucking Unlimited, 404 U.S. 508, 513 (1972); see supra note 102. Allied Tube may have limited the Court’s holding in California Motor Transport. In that case, the Court held that antitrust liability may exist for “misrepresentations made under oath at a legislative committee hearing in the hopes of spurring legislative action.” Allied Tube & Conduit v. Indian Head, 486 U.S. 492, 504 (1988).

172. In Unocal, CARB likely adopted the best standard (with respect to air quality, as opposed to cost-effectiveness). Union Oil Co. of Cal., Docket No. 9305, 77 (F.T.C. July 7, 2004) (opinion of the commission), http://www.ftc.gov/os/adjpro/d9305/040706commissionopinion.pdf. Indeed, based upon the non-cost information that it had, CARB incorporated Unocal’s T50 component into its formulae. See supra notes 94, 97. The standard might be viewed as inferior from a cost perspective; CARB did not have at hand the relevant information as to the potential licensing fees that would be required of refiners because it was under the impression that Unocal would not enforce its patent rights. See supra note 96 and accompanying text. However, it takes little creativity to imagine a situation in which deceit might compel an SDO to adopt a standard that is less safe. This is a very real danger of the Noerr-immunized SDO. It would be all the more troublesome because, if the SDO were a quasi-legislative body acting under the auspices of the relevant legislature, the SDO itself would almost certainly be immune from damages. Presumably, this danger could be largely ameliorated by thorough “legislative” inquiry by the SDO, undertaken with the full understanding that participants likely have a strong profit motive to having a particular standard adopted.

173. California’s Attorney General accused Unocal “of seeking to ‘hijack and distort’ the state regulatory process.” Mueller, supra note 77, at 627.

174. See supra note 79. Even quasi-legislative SDOs may be unable to protect the profit-for-innovation exchange with would-be participants in some circumstances. See infra Part IV.
IV. CONCLUSION

A number of obstacles lie in the path to reinstituting the incentive-based system for innovation that has long existed in this country. One such obstacle is deciding which SDOs to retain as quasi-legislative bodies and which to dispose of as unnecessary. Another potential problem is the level of inquiry that would become necessary for relevant bodies to undertake in a Noerr-immunized SDO world. There would almost certainly be economic costs involved. And, perhaps most importantly, there is no assurance that this system would produce results any more equitable, on balance, for parties interested in the standard chosen.

The recent increased scrutiny of SDOs is well justified by the enormous potential for abuse they carry. This increased scrutiny has unfortunately led policy-makers in the potentially hazardous direction of endorsing discrete, relatively small central-planning authorities that decide upon what factors competitors across entire industries will compete. This, in turn, has put in jeopardy the incentive system that drives much beneficial innovation. The SDO problem should be recognized as just

175. Indeed, incentives to encourage innovation have existed at least since the Constitutional Convention. See U.S. Const. art. I, § 8.
176. This problem is directly related to the difficulty of separating safety standards from non-safety standards. For an example illustrating this difficulty, see Mueller, supra note 77, at 633 n.48 (citing Malcome W. Browne, Refining the Art of Measurement, N.Y. TIMES, Mar. 20, 2001, at D1–D6) (The incompatibility of Baltimore’s fire hydrants and the fire hose connectors of other cities during a 1904 fire meant that fire departments called in to help battle the blaze had to sit by idly while 1,500 structures burned.). Are fire hose connectors merely technical standards, or, because of how the product is used, are they safety standards? Perhaps computer interoperability standards are safety standards as well when the computers in question are employed by air traffic controllers. Indeed, it would be difficult to conceive of a standard having absolutely no safety value in any situation.
177. See supra note 172.
178. The increased investigation necessary would certainly take more time and resources. See supra note 172.
179. Nothing would stop a quasi-legislative CARB from concluding that Unocal’s technology would be too expensive and writing the standard so as to avoid overlap. Unocal’s options would have been improved, but only if CARB had not undertaken the kind of comprehensive inquiry suggested here. Perhaps this indicates another solution to the problem: SDOs should not be given mandates to find the most cost-effective solution to a particular problem. Such solutions would never include patented technologies because of the probability of licensing fees.
180. This is well-illustrated by Unocal’s conduct before CARB. See supra Part II.A.
181. The case law supports the notion that no standards-setting body can escape antitrust scrutiny if it attempts to limit competition by restricting output or price. See, e.g., Nat’l Soc’y of Prof’l Eng’rs v. United States, 435 U.S. 679 (1978). Outside of these direct price restraints, the examination will be under the rule of reason. See discussion supra note 78. However, the faith that legislators and the enforcement bodies have placed in the SDO concept indicates that each believes strongly in its pro-competitive effects. See supra note 43.
182. See generally Stoner, supra note 79; FTC Innovation Report, supra note 79.
that: a problem. The solution cannot be to rely increasingly upon such organizations and protect them from antitrust scrutiny;\textsuperscript{183} the solution is to allow, and to compel, competitors to compete.\textsuperscript{184}

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\textsuperscript{183} See supra notes 43–45.

\textsuperscript{184} The current rationale behind antitrust enforcement is that “freely operating competitive markets will result in the most efficient allocation of a nation’s scarce resources and will bring consumers the widest variety of choices and the lowest possible prices.” See Balto, supra note 8, at 15. A move back towards governmental standards-setting will by no means facilitate “freely operating competitive markets,” and is therefore in many respects an undesirable result for consumers. \textit{Id}. The current trend of dis-incentivizing innovation, however, is worse still.