MEMORANDUM

From: AMC Staff†
To: Commissioners
Date: June 14, 2006
Re: New Economy-Patents Discussion Memorandum

The Commission adopted for study how the current intellectual property regime affects competition.¹ The Commission received numerous calls to study such issues. House Judiciary Committee Chairman F. James Sensenbrenner asked the Commission to “examine whether the antitrust laws should be amended to forcefully defend IP rights while promoting effective competition.”² Others also called on the Commission to study these and related issues. For example, the ABA Antitrust Section suggested that AMC study “the interface of intellectual property and antitrust,” and the principle question of “how to stimulate innovation without unduly burdening competition.”³ Similarly, the American Antitrust Institute (“AAI”) suggested that AMC study how conflicts between the goals of intellectual property law and antitrust law

† This memorandum is a brief summary prepared by staff of the comments and testimony received by the AMC to assist Commissioners in preparing for deliberations. All Commissioners have been provided with copies of comments and hearing transcripts, which provide the full and complete positions and statements of witnesses and commenters.

should be resolved. The Business Roundtable also suggesting looking at “clarifying the relationship between the antitrust and intellectual property laws.”

The Commission sought comment from the public on May 19, 2005, on the following issues:

A. Examination of the reports on the patent system by the National Academies’ Board on Science, Technology, and Economic Policy and the Federal Trade Commission


1. Do the reports fully capture the role of patents and developments in patent-related activity (e.g., applications, grants, licensing, and litigation) over the past 25 years?

2. Are the concerns or problems regarding the operation of the patent system identified in the two reports well-founded?

3. Which, if any, of the recommendations for changes to the patent system made in those two reports should be adopted?

4. Are there other issues regarding the operation of the patent system not addressed in either report that should be considered by the Antitrust Modernization Commission? Please be specific in identifying any issue and the reasons for its importance.

The Commission held a hearing on this topic on November 8, 2005. In addition to the first panel, which addressed the intersection of antitrust and intellectual property, the second panel addressed patent reform. The witnesses were: Susan DeSanti, FTC Deputy General Counsel for Policy Studies; Peter Detkin, Managing Director, Intellectual Ventures; Mark A.

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4 Comments of the American Antitrust Institute (“AAI”) on the Issues to be Included on the Commission’s Agenda, at 4-5 (Sept. 30, 2004).

Lemley, Professor, Stanford Law School; Stephen A. Merrill, Executive Director, National Academies’ Board on Science, Technology, and Economic Policy (STEP); Stephen M. Pinkos, Deputy Under Secretary of Commerce for Intellectual Property and Deputy Director of the U.S. Patent and Trademark Office; and Stephen A. Stack, Jr., Partner, Dechert LLP.  

The Commission received comments from seven entities relevant to these issues, including AAI, Red Hat, Inc., the American Intellectual Property Law Association, and the Computer & Communications Industry Association.

I. Background

Do the FTC and NAS-STEP reports fully capture the role of patents and developments in patent-related activity (e.g., applications, grants, licensing, and litigation) over the past 25 years?

Are the concerns or problems regarding the operation of the patent system identified in the two reports well-founded?

This section begins with a brief overview of developments regarding aspects of the patent system, patent applications, grants, litigation and related matters. It then examines a number of reform proposals from the FTC Report and the STEP Report, and several raised in comments or at the Commission’s hearings. It also describes responses to these proposals by AIPLA (“AIPLA-FTC” and “AIPLA-STEP”) and the ABA IP Section (“IP Section-FTC,” and “IP Section-STEP”).

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7 Unless otherwise noted, all references to “Trans.” are to the transcript of the hearing on November 8, 2005.
Section-STEP”),\textsuperscript{10} as well as other commentary on these issues, including comments received on these issues from the public.

Patent reform has garnered much recent attention and is a live topic in Congress. Congressman Lamar Smith introduced H.R. 2795 on June 8, 2005, after circulating a “Committee print” version three months earlier.\textsuperscript{11} Chairman Smith has revised H.R. 2795 in various ways, which are reflected in a document entitled Amendment in the Nature of a Substitute to H.R. 2795, which was the subject of hearings before the House Subcommittee on Courts, the Internet, and Intellectual Property on September 15, 2005.\textsuperscript{12} A total of four hearings have been held on these and related proposals.\textsuperscript{13}

The Federal Trade Commission has continued to push for patent reform. After issuing its report in 2003, the FTC has organized and participated in a number of conferences. In April

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2004, it co-sponsored a conference with STEP and the Berkeley Center for Law and Technology on patent system reform at the University of California at Berkeley, which coincided with the issuance of the STEP Report.\textsuperscript{14} Similarly, in 2005, the FTC, STEP, and the American Intellectual Property Law Association ("AIPLA") co-sponsored a conference and a number of "town meetings," at which members of the patent community and others offered their perspectives on patent reform.\textsuperscript{15}

A. Role of Patents and Antitrust in Promoting Innovation

Many commentators believe that patents encourage innovation. "Patent policy encourages prospective inventors to invest time and money in inventions, because a patent’s grant of exclusive right to make, sell, and use the invention for a certain period of time can allow inventors to realize returns sufficient to encourage the initial investments."\textsuperscript{16} They recognize that "the underlying principles of America’s system of IP protection . . . have helped propel [the United States] from a nation that we all know as a small agrarian society to the world’s preeminent technological and economic superpower."\textsuperscript{17} Studies have shown that IP-based enterprises make up the largest sector of the U.S. economy—roughly $5 trillion, or about 45% of the U.S. GDP.\textsuperscript{18}

Other commentators, however, have questioned the role of patents in encouraging research and development in certain industries. For example, the STEP Report discussed how

\textsuperscript{16} FTC Report, ch. 1, at 1-2.
\textsuperscript{17} Trans. at 102-03 (Pinkos).
\textsuperscript{18} Trans. at 103 (Pinkos).
the lack of available industry-specific and comparative research makes it difficult to determine the benefits of the recent increase in patents.\textsuperscript{19} AAI expressed doubts about the argument that the strengthening of the patent system in the 1980s lead to the subsequent robust performance of the U.S. economy in the 1990s, arguing that the industries underlying that revolution (computers, semiconductors, and computer software) were less patent dependent.\textsuperscript{20} Similarly, others have found that patents play a prominent role in stimulating innovation in only a few industries.\textsuperscript{21} Yet other studies have shown that most industry patents are judged to be a less important means of protecting innovations than, for example, being first to market or retaining know-how as trade secrets.\textsuperscript{22}

Although competition can spur innovation, there are limits on this capacity, and antitrust can potentially undermine the incentives created by the patent system.\textsuperscript{23} The FTC Report described the interaction between the patent and antitrust systems has evolved over time—antitrust was generally dominant between 1930 and 1980. However, in recent years antitrust law has incorporated a more rigorous economic framework and become substantially less hostile toward patent licensing and similar transactions, recognizing their procompetitive potential.\textsuperscript{24} Moreover, while in the past some have argued that IP and antitrust are inherently in conflict with

\textsuperscript{19} \textit{STEP Report}, at 35.
\textsuperscript{20} Comments of the American Antitrust Institute Working Group on the New Economy, at 23-24 (July 15, 2005) (“AAI Comments”).
\textsuperscript{21} \textit{See} Wesley M. Cohen and Stephen A. Merrill, eds., \textit{Patents in the Knowledge-Based Economy}, at 3 (2003) (“Empirical work by a number of economists over nearly fifty years suggests that patents play a prominent role in stimulating invention in only a few manufacturing industries”); \textit{see also} Comments of Red Hat, Inc., at 3-4 (July 15, 2005) (“it is increasingly evident that the patent system does not produce consistent effects in all industries and for all technologies,” and “whether all fields of technology and all industries should be treated in an identical manner under patent law”).
\textsuperscript{22} \textit{Id.}
\textsuperscript{23} FTC Report, ch. 2, at 8-17; \textit{id.}, ch. 1, at 13-17.
each other (i.e., patents grant monopolies and antitrust laws sought to eliminate monopolies),
today leading authorities view antitrust and patent laws as working together to promote
innovation and to benefit consumer welfare. Meanwhile, as described below, patent law has
been strengthened.

B. Expanded Importance of Patent Rights

Many believe that changes in the patent system have resulted in increasing strength and
importance of patent rights. Whereas the patent system in the 1970s was generally perceived to
be “weak and ineffective,” beginning in the early 1980s, the patent system changed due to a
series of legislative actions, judicial decisions, and executive branch initiatives. These changes
to intellectual property policy included steps to: “(1) extend patenting to new subject matter; (2)
strengthen the position of patent holders vis-à-vis infringers; (3) encourage new classes of
patentees; (4) extend the duration of some patents; and (5) relax antitrust limitations on the use of
patents.”

Probably one of the most significant changes was the creation of the Court of Appeals for
the Federal Circuit in 1982, which was granted exclusive jurisdiction of all appeals of patent
cases. Many believe that “the Federal Circuit strengthened patent rights significantly,”
upholding patent validity and infringement claims more often than courts had previously.
Others have seen a connection between the creation of the Federal Circuit and the “number of

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24 Id., ch. 1, at 14-25.
25 See, e.g., R. Hewitt Pate, Antitrust and Intellectual Property, Address Before the
American Intellectual Property Association, at 3 (Jan. 24, 2003); see also FTC Report, Executive
Summary (“ES”) at 1-2.
26 STEP Report, at 21-22; see also FTC Report, ch. 1, at 18-22.
27 STEP Report, at 22.
Some commentators point out, however, that the creation of the Federal Circuit and other changes implemented since the 1980s have not necessarily resulted in increased findings of patent infringement. For example, the FTC Report argued that the situation is more complex: although it may be easier to acquire patents under the current patent system, it has become harder to prove infringement, i.e., “we are seeing more, but narrower patents.” Nevertheless, many commentators believe that the policy changes since the 1980s have increased the rate at which patentees prevail in litigation, and that this may have lead to the patenting surge of the past couple decades.

Other commentators emphasize differences in the ways in which the PTO is organized. For example, Jaffee and Lerner argued that “in the early 1990s, Congress changed the structure of fees and financing of the U.S. Patent and Trademark Office (PTO) itself, trying to turn it into a kind of service agency whose costs of operations are covered by fees paid by its clients (the patent applicants).” This has combined with Federal Circuit legal interpretations “to make it much easier to get patents.”

C. Patenting Activity

Over the past couple decades, there has been a tremendous surge in the number of patent applications filed and the number of patents granted. In 1984, there were around 120,000 patent applications, number of patents issued, the success rate of patent applications, the amount of patent litigation, and, possibly, the level of research and development expenditures.”

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31 See, e.g., FTC Report, ch. 5, at 25.
32 See STEP Report, at 28.
applications filed and around 72,000 patents granted.\textsuperscript{35} In contrast, in 2004, there were over 382,000 applications filed and over 181,000 patents granted.\textsuperscript{36} Patent applications therefore have begun to arrive at the PTO at a rate of over 1,000 per day. Moreover, companies are acquiring far more patents for every dollar they invest in R&D. The amount of patents received per million dollars of R&D has risen 89 percent from 1985 to 1997 (from 0.18 patents per million dollars to 0.34 patents per million dollars).\textsuperscript{37}

Partially as a result of the surge in patenting activity, the pendancy of applications has increased appreciably over time. The STEP Report found that pendancy rose from an average of 18.3 months in 1990 to 24 months in 2002.\textsuperscript{38} There is currently a backlog of approximately 600,000 unexamined patent applications at the PTO, which would take two years to process even if new applications stopped.\textsuperscript{39} This delay is harmful because it may result in lower quality patents and discourage innovation.\textsuperscript{40} Alternatively, companies may choose to forego the patent system and increase their use of trade secret protections, which would inhibit sharing of useful discoveries and information.\textsuperscript{41}

In addition to the quantitative increase in patenting activity, recent years have also seen qualitative changes in patenting activity. As Allison and Lemley have found, obtaining a patent has become a more complex process, involving more claims, including citations to more prior

\textsuperscript{34} Id.
\textsuperscript{36} Id.
\textsuperscript{37} STEP Report, at 28.
\textsuperscript{38} Id. at 51.
\textsuperscript{39} Trans. at 105 (Pinkos).
\textsuperscript{40} Trans. at 105-06 (Pinkos).
\textsuperscript{41} Id.
art, taking more time, and involving more refilings.\footnote{Mark A. Lemley & John R. Alison, \textit{The Growing Complexity of the United States Patent System}, 82 B.U. L. Rev. 77,79 (2002)} They also found that patents today are more heterogeneous than they were two decades ago.\footnote{\textit{Id.}} The STEP Report argued that these changes may be indicative of the “increased salience of patents to U.S. business,” and that companies are willing to invest more in the process of applying for patents, in order to “enhance the eventual patent’s value in licensing and litigation.”\footnote{STEP Report, at 33-34.}

D. \textbf{Low Quality Patents}

Numerous commentators have argued that the quality of patents issued by the PTO has decreased over time. For example, several witnesses at the FTC-DOJ hearings “sharply questioned the adequacy of patent quality.”\footnote{FTC Report, ch. 5, at 6.} One feature of a “poor quality or questionable patent” is that it is “likely invalid.”\footnote{Trans. at 99 (DeSanti).} Some indicia of possible patent quality deterioration are (1) resources at the PTO have not kept up with the workload, (2) the apparent significantly higher approval rate of patents in the U.S. compared to Europe, and (3) the perceived dilution of the non-obviousness standard, particularly in biotechnology.\footnote{Trans. at 108-10 (Merrill).} According to a survey conducted by the Intellectual Property Owners Association in August 2005, almost half of respondents rated the quality of patents being issued in the U.S. as “less than satisfactory,” while only 8.8% rated the quality as “more than satisfactory.”\footnote{Intellectual Property Owners Association, “IPO Survey: Corporate Patent Quality Perceptions in the U.S.” (Sept. 20, 2005), at 2, \textit{available at} http://www.ipo.org/Template.cfm?Section=IPO_Publications&Template=/ContentManagement/ContentDisplay.cfm&ContentID=20075.}
There is not complete agreement, however, that patent quality has been deteriorating. For example, the STEP Report found that “the claim that quality has deteriorated in a broad and systematic way has not been empirically tested,” and that the studies that have been conducted have had mixed results.\textsuperscript{49} Similarly, Carl Shapiro found that “systematic empirical evidence regarding trends in patent quality is mixed.”\textsuperscript{50} One witness noted that although patent quality could be better, there is little evidence that there is an abundance of “really poor quality patents out there,” and that “anecdotes and polls are not evidence” of poor patent quality.\textsuperscript{51} Others criticized the FTC Report’s references to “so-called ‘questionable’” patents as “imprecise” and without a “working definition.”\textsuperscript{52}

Most commentators agree that low quality patents and uncertainty can cause harm to competition. The “prevalence of poor quality patents is an impediment to competition [and] harms consumer welfare.”\textsuperscript{53} The FTC Report identified three main anticompetitive concerns stemming from issuing patents of questionable validity: (1) discouraging entry and innovation, (2) inducing unnecessary licenses and royalty payments, and (3) imposing litigation costs.\textsuperscript{54} Together, these have raised significant concerns that the patent system is “out of balance with competition policy,” and that poor patent quality “can stunt incentives to innovate.”\textsuperscript{55}

Although there are a number of explanations for the posited decrease in patent quality,
one important factor is the insufficient resources at the PTO. The number of patent examiners has not kept pace with the increase in workload, which results both from an increased number of applications and the greater complexity of the applications (reflected in a larger number of claims and increased number of prior art citations per application). Specifically, the number of examiners per 1,000 patent applications was “down about 20 percent over the last four or five years.” Some estimates suggest that “patent examiners have from 8 to 25 hours to read and understand each application, search for prior art, evaluate patentability, communicate with the applicant and work out necessary revisions, and reach and write up conclusions.” Other explanations for the decrease in patent quality include the incentive system for patent examiners at the PTO, and the perceived lower legal standards for non-obviousness.

E. Patent Litigation

As the number of patent applications has risen, so too has the number of IP suits filed in U.S. district courts. In 1995, there were approximately 1700 suits filed in district courts. By 2004, that number had risen to over 3000 suits—approximately an 80% increase. The increase over a longer period is even larger—from 1980 to 2000, the amount of patent litigation tripled.

56 STEP Report, at 51.
57 Id.
58 FTC Report, ES at 10.
59 See Trans. at 110 (Merrill); see also Adam B. Jaffe & Josh Lerner, Innovation and its Discontents 136-38 (2004).
60 See, e.g., Trans. at 110-11 (Merrill) (“courts should revisit the question of non-obviousness”); see also FTC Report, ch. 4, at 4-19.
62 Id.
63 FTC Report, ch. 5, at 24.
Patent lawsuits often impose long delays for resolution of validity questions. The median length of time for resolution of validity from the issuance of a patent through court litigation was 7.8 years.64

Patent lawsuits are also costly. A recent AIPLA survey reports that the median litigation cost rose to $4.5 million in a patent suit for each party in 2005 when more than $25 million is at risk.65 In addition to the monetary costs, there are also opportunity costs, such as the time that managers and technical personnel must devote to the lawsuits.66 Even before lawsuits are filed, the average corporate U.S. patent prosecution now costs the applicant $10,000 to $30,000 in fees—most of which goes to legal counsel, as PTO fees have remained relatively low over the years.67 The AIPLA survey also indicated that typical charges for various services in connection with preparing patent applications have increased up to 50 percent between 1998 and 2005.68 As a result, the STEP Report concluded that the “direct and opportunity costs of litigation may affect the rate of innovation in ways that are hard to measure or even detect.”69

F. Need for Reform

As a result of all of these developments, various experts believe that the patent system should be reformed. The FTC Report stated that although most of the patent system works well, some modifications are needed in order to maintain a “proper balance of competition and patent

64 STEP Report, at 67 (also noting the median length of time between patent application filing and resolution of validity challenges in court litigation was 11.3 years).
66 STEP Report, at 38.
67 Id.
69 Id.
law and policy.”70 Others share the view that reform is needed. Adam Jaffe and Josh Lerner summed up their perspective on the current state of the patent system, when they wrote that a “treatment plan” is needed to address “[t]he intense pathology of the current system aris[ing] from the combination of stronger patent protection, a decline in the standards for granting patents, and the emergence of broad, apparently invalid, patents in particular industries undergoing rapid technological change.”71 Carl Shapiro concluded that “there is compelling evidence that the U.S. patent system could benefit from significant reform,” both with regard to the process of granting patents at the PTO and the procedures for patent litigation.72 Similarly, the STEP Report stated that continuing high rates of innovation suggest that, while the patent system is working well, “both economic and legal changes are putting new strains on the system.”73 Some scholars agreed and argued that, while patents are critical to innovation, the patent system is “in need of an overhaul.”74 However, there are many who question the need for extensive reform, and, as reflected below, the extent of agreement on particular reform proposals varies widely.

70 Id.
73 STEP Report, at 1.
74 Lemley Statement, at 1.
II. Proposals for Patent Reform

Which, if any, of the recommendations for changes to the patent system made in the FTC and NAS-STEP reports should be adopted?

Are there other issues regarding the operation of the patent system not addressed in either report that should be considered by the Antitrust Modernization Commission?

This section sets out proposals, grouped into four general areas: (1) the application of competition principles and economics in patent decision making, (2) filing and publication of patent applications, (3) review of patent applications, and (4) patent litigation.

A. Applying Competition Principles and Economics in Patent Decision Making

1. Courts should consider potential harm to competition in deciding whether to extend the scope of patentability to new areas. [FTC Rec. #6]

Despite the broad mandate of the Patent Act as to patentable subject matter, courts have long held certain types of inventions to be unpatentable. Examples of traditional common law exceptions include phenomena of nature, abstract intellectual concepts, mental steps, mathematical algorithms with no substantial practical application, printed matter, and until recently, business methods. In recent years, courts have extended the scope of patentable subject matter into areas such as software, man-made living organisms, and business methods.\(^\text{75}\)

The FTC Report recommended that decision makers consider possible harm to competition—along with other possible benefits and costs—before extending the scope of patentable subject matter.\(^\text{76}\) In particular, before extending patent coverage to new fields, Congress and the courts should ask whether the extension of patentability will promote the progress of science and useful arts or instead will hinder competition that can function

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\(^{75}\) FTC Report, ES at 14.

\(^{76}\) Id.; id., ch. 4, at 43.
effectively to spur innovation.\textsuperscript{77} In their public comments, the Computer & Communications Industry Association (“CCIA”) agreed with the FTC recommendation, and stated that the recommendation is “in effect a critique of the activist policymaking record” of the Federal Circuit.\textsuperscript{78}

Both AIPLA and the IP Section opposed the FTC recommendation.\textsuperscript{79} Congress has made it clear that “anything under the sun made by man” is patentable, and therefore neither the PTO nor the courts have the statutory authority to require a case-by-case analysis of economic policy goals in determining whether the scope of patentable subject matter should be extended.\textsuperscript{80} The FTC’s analysis is fundamentally flawed because it is grounded in a false parallel between the antitrust laws and the patent laws; the rule-bound nature of patent law would make factoring economic analysis into patentability determinations difficult.\textsuperscript{81} Furthermore, recent decisions broadening patent scope reflect judicial determinations that previously imposed restrictions on patentability were contrary to law rather than policy judgments.\textsuperscript{82}

The STEP Report did not include a specific recommendation regarding this issue. This issue is not specifically addressed in the Smith bill.

\textsuperscript{77} \textit{Id.}
\textsuperscript{78} Comments of the Computer & Communications Industry Association to the AMC Working Group on the New Economy, at 2 (July 20, 2005) (“CCIA Comments”); see also AAI Comments, at 25 (suggesting that the Federal Circuit “appears to have been captured by patent advocates,” and that the President should either seek greater diversity of backgrounds in Federal Circuit appointments, or “revisit the whole idea of an integrated court for intellectual property appeals”).
\textsuperscript{79} AIPLA-FTC, at 28-29; IP Section-FTC, at 21-23.
\textsuperscript{80} See AIPLA-FTC, at 30-33.
\textsuperscript{81} IP Section-FTC, at 22.
\textsuperscript{82} \textit{Id.} at 22; see AIPLA-FTC, at 30-33.
2. Expand consideration of economic learning and competition policy in patent law decision making. [FTC Rec. #10]

The FTC Report recommended expanding the consideration of economic learning and competition policy in patent law decision making.\(^{83}\) The incorporation of such economic learning has substantially improved the development of antitrust law and competition policy, and the Federal Circuit and PTO may also benefit from much greater consideration and incorporation of such learning in their decision making.\(^{84}\) This view is also supported by CCIA, which also advocated greater use of empirical and economic analysis in patent law.\(^{85}\) The recommendation calls for patent policymakers to take a broader perspective in setting patent policy. It is not intended to apply to decisions regarding individual patent applications or cases, but rather to rules and guidelines developed by the PTO (e.g., guidelines for examinations) and the Federal Circuit (e.g., standards for non-obviousness).\(^{86}\)

AIPLA and the IP Section opposed the FTC recommendation.\(^{87}\) The patent laws and the antitrust laws have the same goals, but serve them through different means. Under the antitrust laws, challenged practices are evaluated individually for their impact on competition and consumers. In contrast, under the patent laws, the effect of individual patents are not evaluated; rather statutory criteria are applied.\(^{88}\) Patent rules thus more closely resemble \textit{per se} antitrust rules, making application of economic principles to individual patentability determinations

\(^{83}\) This was identified as an area “might be the most fruitful for considerations by the Antitrust Modernization Commission.” Trans. at 100 (DeSanti).
\(^{84}\) FTC Report, ES at 17; \textit{id.}, ch. 5, at 7-9.
\(^{85}\) CCIA Comments, at 2; \textit{see also} Trans. at 186 (Lemley) (FTC is “absolutely right,” since the PTO “is making economic policy”).
\(^{86}\) Trans. at 183-84 (DeSanti).
\(^{87}\) AIPLA-FTC, at 40-44; IP Section-FTC, at 30-31. However, AIPLA’s opposition to this recommendation “proceed[ed] from the assumption that what was being advocated was individual consideration, patent by patent, of competitive effects.” Trans. at 185 (Stack).
\(^{88}\) IP Section-FTC, at 30-31.
The statutory system is, as a whole, designed to create incentives for innovation that ultimately benefit consumers. Therefore, Congress, and not the PTO or the courts, is the proper authority to consider economic theory and competition policy-oriented principles.

The STEP Report did not include a specific recommendation regarding this issue.

This issue is not directly addressed in the Smith bill.

3. Increase communications between antitrust authorities and patent law decision makers. [FTC Rec.]

Many participants at the FTC/DOJ hearings believed that patent and competition communities appear to “exist in separate worlds” and “interact[] infrequently.” Participants expressed concern that decision makers in patent institutions do not always fully understand or accommodate economic learning or competition concerns.

The FTC plans to address these concerns by seeking to improve communications between the competition and patent communities. This includes three specific steps. First, the FTC will increase its competition advocacy role through filing amicus briefs in appropriate circumstances. Second, the FTC will ask the PTO Director to reexamine questionable patents that raise competitive concerns in appropriate circumstances. Third, the FTC will encourage increased communication between patent institutions and antitrust agencies, e.g., through the establishment of joint panels to facilitate communication or the establishment of an office of competition

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89 Id.; Trans. at 186 (Pinkos) (it would be “difficult to interject economic or competitive analysis into the patent examination process”).
90 IP Section-FTC, at 30-31.
91 AIPLA-FTC, at 40-44.
92 See FTC Report, ES at 17.
93 Id.
advocacy at the PTO.\textsuperscript{94} The FTC has yet to request that a patent be reexamined, in part because of limitations on the FTC’s patent expertise.\textsuperscript{95}

The STEP Report did not include a specific recommendation regarding this issue.

This issue is not specifically addressed in the Smith bill.

B. Filing and Publication of Patent Applications

1. Adopt first-inventor-to-file priority rule. [NAS-STEP Rec. #7]

Under the U.S. patent system, priority is currently given to the applicant who is first to invent, rather than first to file an application claiming the invention (as is true in most other countries). As a result, there is sometimes a need for the PTO or the courts to determine who was the first to invent the claimed invention in awarding a patent.

There are numerous calls to adopt a rule giving priority to the first applicant to file a patent application, replacing the current rule giving priority to the first-to-invent.\textsuperscript{96} Such a change would conform U.S. law with the rule in the rest of the world, and thus promote international harmonization.\textsuperscript{97} Reform would avoid the high costs of determining the first-to-invent, although there are few cases in which this is an issue.\textsuperscript{98} There is little evidence that the first-to-invent system protects individual inventors and small businesses more than a first-inventor-to-file system.\textsuperscript{99} One witness noted that while it might seem that there is “no

\textsuperscript{94} Id. at 17-18.
\textsuperscript{95} Trans. at 182 (DeSanti).
\textsuperscript{96} STEP Report, at 124-27; AIPLA-STEP, at 37-42; IP Section-STEP, at 1-3.
\textsuperscript{97} STEP Report, at 124-27.
\textsuperscript{98} Id.
\textsuperscript{99} Id.
controversy in this room, most likely, there is significant controversy out there about first to file,” since many people oppose simply adopting the foreign approach.\textsuperscript{100}

Many argue that the U.S., in adopting a first-to-file system, should retain and encourage other countries to adopt a one-year “grace period” that would allow a patent applicant to publish details regarding a claimed invention during the year prior to filing an application without the publication being considered prior art.\textsuperscript{101} One witness argued that first-inventor-to-file rule “becomes more problematic” if it is not accompanied by provisions requiring publication of all patent applications and expansion of prior user rights.\textsuperscript{102}

The FTC Report did not include a specific recommendation regarding this issue.

H.R. 2795 would adopt the first-inventor-to-file rule.\textsuperscript{103}

2. Publish all patent applications after 18 months. [FTC Rec. #7; NAS-STEP Rec. #3]

Most foreign patent systems require publication of patent applications after 18 months. Prior to 1999, U.S. patent applications were not published until the patent issued. Under the American Inventors Protection Act of 1999, U.S. patent applications become public 18 months after filing, unless the applicant certifies that the invention will not be the subject of any foreign or international application (most foreign applications become public 18 months after filing).\textsuperscript{104}

\textsuperscript{100} Trans. at 167 (Detkin).

\textsuperscript{101} AIPLA-STEP, at 35-42 (one-year grace period also would better protect small inventors and their inventions and the complexity of identifying the first-to-invent); IP Section-STEP at 2 (retaining the one-year “grace period” is important).


\textsuperscript{103} See H.R. 2795, 109th Cong. § 3 (2005).

As a result, currently 90 percent of all pending U.S. patent applications are published 18 months after filing with the PTO.\footnote{FTC Report, ch. 1, at 26.}

There is broad support for making patent applications public 18 months after being filed.\footnote{Id.; id. ES at 15-16; STEP Report, at 128; AIPLA-FTC, at 33-34; AIPLA-STEP, at 46-47; IP Section-FTC, at 24; see also IP Section White Paper, at 20. One commenter emphasized that this reform should be accompanied by adoption of a first-inventor-to-file system. AIPLA-STEP, at 46.} Publication puts the public on notice of patent rights that may issue in the future, and thereby enables the public to avoid adopting infringing technologies.\footnote{FTC Report, ES at 15-16; STEP Report, at 128 (promotes harmonization internationally, increases disclosure, reduces the uncertainty associated with submarine patents, and protects patentees for infringement occurring after publication). There is debate as to whether the existing exception to the publication requirement for patent applications that are not subject to foreign or international filings should be retained. Compare Trans. at 132 (Detkin) (exception “makes sense”) with Lemley Statement, at 5 (“If the first inventor to file system is to work, it is absolutely essential that the patent system require prompt publication of all U.S. patent applications.”).} Absent publication, firms might make large investments in a technology that is covered by a pending application, and be subject to demands for “supra-competitive royalties” when the patent issues.\footnote{FTC Report, ES at 15-16.} This problem is especially acute in situations in which the applicant prolongs the examination process to delay issuance of a patent while other firms adopt infringing technologies (so-called “submarine patents”).\footnote{Id. AIPLA qualifies its support in two ways. First, applicants should still be able to abandon an application in order to avoid publication. AIPLA-FTC, at 34. Second, its support comes within the context of an overall harmonization package including the adoption of a first-inventor-to-file rule. If the first-to-invent rule remained, it could create situations where competitors could file applications based on information derived from another competitor’s published application, and then provoke a costly interference proceeding with the original patent applicant. AIPLA-STEP, at 46.}
H.R. 2795 would extend the requirement of publication after 18 months to all U.S. patent applications.\textsuperscript{110}

C. Review of Patent Applications

1. Strengthen processes for reviewing of patents. [FTC Rec. #5.a-c; NAS-STEP Rec. #4]

Patent applications are reviewed by patent examiners at the PTO. In determining whether a claimed invention is novel and non-obvious, a patent examiner searches the relevant prior art—e.g., previous patents or scientific, technical or other literature. Applicants often have more knowledge than examiners of the most relevant prior art. Applicants are currently required to submit prior art of which they are aware (the “duty of candor”). In addition, under PTO Rule 105, patent examiners can request information from the applicants.\textsuperscript{111} The FTC noted concerns that applicants may overwhelm examiners with voluminous prior art citations, but do not often provide information about how the prior art is relevant, and which is the most relevant.\textsuperscript{112}

In some areas, particularly business method patents, the PTO has recently instituted a review process known as a “second pair of eyes,” where, after one examiner has determined that a patent should be granted, another experienced examiner briefly reviews the examiner’s determination to flag issues that need further attention.\textsuperscript{113} The PTO is also developing a new electronic filing system.

The reports, responses, and comments suggested a number of possible specific reforms to improve the review process.

\textsuperscript{110} See H.R. 2795, 109th Cong. § 9 (2005).
\textsuperscript{111} 37 C.F.R. § 1.105.
\textsuperscript{112} FTC Report, ch. 5, at 11-13.
\textsuperscript{113} FTC Report ch. 6, at 19-20.
Prior art disclosures. The FTC suggested that PTO amend its regulations to require that, upon the request of the examiner, applicants submit statements of relevance regarding their prior art references.\(^ {114} \) PTO acknowledged that patent review could be improved if “better [quality] applications” were filed, especially with better identification of the relevance of prior art references.\(^ {115} \) Specifically, PTO is considering limiting prior art citations to those the applicant has reviewed and believes relevant for applications with more than 25 references.\(^ {116} \)

There was substantial opposition to this proposal. One concern is that little or no useful information will result from such statements, and that risks are high that such statements will be used against applicants in potential future litigation.\(^ {117} \) A second concern is that such a program could be subject to abuse by examiners and would result in unwarranted allegations of inequitable conduct in patent litigation.\(^ {118} \)

Use of Rule 105 process. The FTC Report encourages the more frequent use of examiner inquiries under Rule 105 to obtain more complete information, and for PTO to reformulate Rule 105 to permit reasonable follow-up, so that examiners can benefit more from the applicants’ knowledge base.\(^ {119} \)

\(^{114}\) Id. ES, at 13-14; id. ch. 5, at 11-13.

\(^{115}\) Trans. at 150 (Pinkos).


\(^{117}\) AIPLA-FTC, at 25-26.

\(^{118}\) IP Section-FTC, at 15. AIPLA expects to comment on PTO’s proposed rule once it is published, and that the “comments will be influenced heavily by how the PTO proposes to handle allegations of inequitable conduct which might be based on the statements the PTO will require applicants to make.” Letter from Michael K. Kirk, Executive Director, AIPLA to Andrew Heimert, Executive Director, AMC (Jan. 10, 2006).

\(^{119}\) FTC Report, ES at 13-14; id. ch. 5, at 13-14.
One commenter objected to this proposal, arguing that there is no benefit to the system from such examiner requests for information.\(^{120}\)

*Expand “second pair of eyes” program.* The FTC suggested implementing the PTO’s recommendation in its 21st Century Strategic Plan, which would expand PTO’s “second-pair-of-eyes” review to selected areas.\(^{121}\) Expanding this program to fields such as semiconductors, software, and biotechnology would help boost the quality of patent review in areas where it will make the most difference.\(^{122}\) Others agreed that the “second-pair-of-eyes” could be expanded.\(^{123}\)

*PTO balance of public and private interests.* There is general agreement that the PTO should emphasize its role as a steward of the public interest, and forge a balance between the public’s interest in intellectual property and each patent holder’s interest in her patent.\(^{124}\) The PTO has been criticized for previous statements indicating that its mission is to “help customers [patent applicants] get patents,” and may no longer take this view.\(^{125}\)

\(^{120}\) AIPLA-FTC, at 26.

\(^{121}\) FTC Report, ES at 13-14; *id.* ch. 6, at 19-20.

\(^{122}\) *Id.* ch. 6, at 20-21.

\(^{123}\) AIPLA-FTC, at 26-27; AIPLA-STEP, at 22; see IP Section-FTC, at 17-18 (focus should be on raising the quality of initial examinations; second examiner review should only be used as necessary where examination processes may be inadequate); IP Section-STEP, at 21-22; CCIA Comments, at 2. AIPLA recommends a study to determine the efficacy of this program. AIPLA-FTC, at 26-27; AIPLA-STEP, at 22.

\(^{124}\) FTC Report, ES at 14; *id.* ch. 6, at 19-20; AIPLA-FTC, at 27 (PTO should balance the public’s interest in intellectual property and the applicant’s interests; PTO’s “stewardship is best served by faithful implementation of the [patent] law” and not by incorporation of economic insights); IP Section-FTC, at 19-20.

\(^{125}\) FTC Report, ch. 6, at 21 (noting PTO has since revised such statements); see IP Section-FTC, at 19-20 (PTO may well no longer fully subscribe to the Mission Statement describing its role roughly as “to help our customers obtain patents.”).
Personnel. STEP recommended hiring more patent examiners because the current number of patent examiners is inadequate to handle the workload, and particularly to allow sufficient time for examiners to exercise judgment.\textsuperscript{126}

Electronic processing. STEP proposed enhancing the search capabilities of the new electronic system for the patent file history (“file wrapper”) the PTO is implementing, and make them publicly accessible along with the application.\textsuperscript{127}

Analytical capability. STEP suggested having the PTO increase the size of the department engaged in technology assessment and forecasting, which could (1) help the PTO anticipate the emergence of new technologies proposed for patenting, (2) propose administrative changes to management, and (3) institute a well-designed quality review process.\textsuperscript{128}

These proposals are not specifically addressed in the Smith bill.

2. Increase PTO funding. [FTC Rec. #4; NAS-STEP Rec. #4]

PTO funding has failed to keep pace with patent applications—the number of issued U.S. patents has nearly tripled from around 66,000 in 1980 to over 184,000 in 2001.\textsuperscript{129} This has a profound impact on the resources available for examining patents. The average amount of time an examiner has to examine an application has been estimated at 8 to 25 hours,\textsuperscript{130} and the current backlog of pending applications is at an all-time high.\textsuperscript{131} The amount of money expended by the PTO is controlled by Congress, and is not linked to the amount of revenue the PTO generates through patent application fees. This has resulted in what has been referred to as the “diversion

\textsuperscript{126} STEP Report, at 104-05; see also infra II.B.3.b (discussing proposed PTO funding).
\textsuperscript{127} STEP Report, at 105.
\textsuperscript{128} Id. at 105-07.
\textsuperscript{129} Id. at 28.
\textsuperscript{130} See FTC Report, ES at 10.
\textsuperscript{131} AIPLA-STEP, at 21.
problem.”

From 1992 to 2003, approximately $638 million in patent and trademark fees went to general revenue rather than being spent on PTO operations (approximately $100 million in 2004). However, more recently, Congress has “essentially” provided funding equivalent to the fees collected in PTO’s most recent appropriation and apparently “is agreeing to do so again.”

There have been widespread calls for Congress to provide the PTO with adequate funding, to ensure quality patent review. One report suggested that there should be a careful assessment of needs and priorities before determining how much more funding should be provided. The PTO has advocated for several years that it “should keep all the fees that it collects.” This proposal would end the diversion problem and ensure that funding increases as the number of patent applications continues to grow. One practical solution that has been proposed to avoid the diversion problem is to provide that any excess fee revenue would be returned to the respective applicants and patent holders from that year—this would help ensure that Congress does not begin diverting fee revenue again. According to one report, “[i]t is believed that since the fee revenues will no longer be available to the appropriators to spend elsewhere that they will appropriate all fee revenues to the PTO.”

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132 See AIPLA-FTC, at 22-23.
133 STEP Report, at 107-08.
134 Trans. at 144 (Pinkos) (In light of recent funding, “the [PTO] does have adequate resources to try to address the quality issues.”).
135 FTC Report, ch. 6, at 18-19; STEP Report, at 103-08; AIPLA-STEP, at 21-22; AIPLA-FTC, at 22-23; IP Section-FTC, at 14; IP Section-STEP, at 18; Trans. at 125 (Stack).
136 STEP Report, at 103-08.
137 Trans. at 144 (Pinkos).
138 AIPLA-STEP, at 21-22; AIPLA-FTC, at 22-23.
139 Id.
Others have questioned, however, whether fee revenue should be linked to PTO expenditures in light of the possible dangers of creating incentives for the PTO to issue more patents and the variability of fee revenue.\footnote{STEP Report, at 107-08.} Commentators have argued that more resources should be provided to the PTO, but they believe that this funding should be made by a lump-sum appropriation (as it is now) in order to avoid incentives for the PTO to issue excessive numbers of patents.\footnote{AAI Comments, at 21.}

The Smith bill does not include a provision addressing funding. Chairman Sensenbrenner, however, has proposed legislation that would establish a Patent and Trademark Fee Reserve Fund in the U.S. Treasury.\footnote{\textit{See} H.R. 2791, 109th Cong. § 5 (2005).} Any excess revenues derived from patent or trademark fees (and not spent on PTO operations) would be deposited in this account, and if the amount collected exceeds the amount appropriated to the PTO by Congress, the excess would be returned to those who had paid application fees in that fiscal year.\footnote{\textit{Id.}}

3. Tighten or reinvigorate the non-obvious requirement. [FTC Rec. #3; NAS-STEP Rec. #2]

Under current patent law, a patent cannot be granted if, based on existing prior art, “the subject matter [of the claimed invention] as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.”\footnote{35 U.S.C. § 103; \textit{see also} FTC Report, ES at 10.} In particular, issues have arisen regarding two tests that are used at times in evaluating whether a patent is “obvious”—the “commercial success” test and the “suggestion” test.\footnote{FTC Report, ES at 10-12.} Under the former test, evidence of the
commercial success of the invention may be used to support a finding of non-obviousness. The
latter test has been applied to require a defendant, in establishing obviousness, to identify
specific prior art that suggests a particular invention, particularly in the context of combination
patents.\textsuperscript{146}

There is general agreement that the “commercial success” test and “suggestion” test
should be applied thoughtfully in determining obviousness; however some contend that they
should be applied with more care,\textsuperscript{147} while others argue that they are applied appropriately
now.\textsuperscript{148}

The FTC makes two specific suggestions. First, it advocates revising the commercial
success test so that the patentee has the burden of proving that the claimed invention caused the
commercial success.\textsuperscript{149} In particular, the FTC emphasized the need for case-by-case inquiries

\begin{footnotesize}
\textsuperscript{146} \textit{Id.}
\textsuperscript{147} FTC Report, ES at 11; STEP Report, at 81-82 (PTO and courts should “assiduously
observe[]” the requirement that a patent issue only if the claimed invention is not obvious to a
person of ordinary skill in the art); see also Trans. at 109 (Merrill) (stating that STEP committee
attorneys found there was “some dilution” of the non-obvious standard, particularly in
biotechnology); AAI Comments, at 21 (agreeing with the FTC and STEP reports that “the
criteria for determining whether an invention is obvious . . . should be revised to avoid protecting
inventions that stem from routine product and process improvement efforts”). The FTC
identifies the problem as lying more with the Federal Circuit than with the PTO. Trans. at 183
(DeSanti). It notes a recent case in which the Federal Circuit overruled a PTO finding that a
patent claim was obvious by applying the suggestion test. Trans. at 184 (DeSanti) (identifying
opinion)). CCIA argues that the suggestion test for obviousness should be eliminated entirely.
See CCIA Comments, at 2.
\textsuperscript{148} IP Section-FTC, at 10-11 (disputing the FTC Report’s analysis of the commercial success
and non-obviousness tests on ground the courts already use approaches substantially like those
advocated by the FTC); AIPLA-FTC, at 19 (no objection to the extent that recommendation does
not imply any need for change in existing law); IP Section-STEP, at 13 (non-obviousness
standard should be assiduously observed); see also Trans. at 149 (Pinkos) (PTO examiners are
well-trained in the applicable legal precedents on obviousness, including \textit{Graham v. John
Deere}).
\textsuperscript{149} FTC Report, ch. 4 at 19.
\end{footnotesize}
into the cause of the invention’s commercial success test, to determine whether factors other than the invention may be responsible.\textsuperscript{150} Second, the FTC advises applying the suggestion test in a manner consistent with the creativity and skills of someone skilled in the art, and to avoid requiring of proof of concrete suggestions for the claimed invention beyond those actually needed by a person with ordinary skill in the art.\textsuperscript{151} Two groups argued that no change in the current legal tests were necessary or appropriate, since current legal standards and practice generally reflect the recommendations.\textsuperscript{152}

STEP identified two other areas where changes should be made. First, Federal Circuit decisions have adopted a \textit{per se} rule regarding the non-obviousness of gene sequences, and recommends that the courts return to a stricter standard, more consistent with standards applied to this field in other countries.\textsuperscript{153} Second, since information about business methods is not commonly found in published literature, STEP recommended that Open Review procedures (\textit{see infra}) be used to improve decisions regarding business method patents.\textsuperscript{154}

Two groups opposed the STEP recommendation that the standard for non-obviousness for gene-sequencing-related inventions be changed.\textsuperscript{155} These two groups agreed, however, that the post-grant review or Open Review system would be appropriate in addressing concerns about non-obvious standards for business method patents.\textsuperscript{156}

These proposals are not specifically addressed in the Smith bill.

\begin{footnotes}
\item[150] \textit{Id.} ES at 10-11; \textit{id.} ch. 4, at 15-19.
\item[151] \textit{Id.} ES at 11-12; \textit{id.} ch. 4, at 9-15.
\item[152] See IP Section-FTC, at 10 (opposing the FTC proposals, explaining that they generally reflect current legal standards and practice); AIPLA-FTC, at 19 (the recommendations are not objectionable “except to the extent that they imply a need to existing law”).
\item[153] STEP Report, at 81-82, 91-95.
\item[154] \textit{Id.} at 81-82, 87-90.
\item[155] AIPLA-STEP, at 12; IP Section-STEP, at 13-14.
\end{footnotes}
4. Continuation reform [ABA IP Section]

Patent applicants are permitted to file continuing applications and requests for a continued application. Such filings have legitimate purposes, such as enabling applicants to craft their claims in light of the examiners’ evidence and arguments. However, such applications contribute to the backlog of unprocessed applications, and, of particular concern, can be used to delay the examination process while other companies are investing in technologies that will infringe the patent when issued. One observer pointed out that although the continuation process can be abused to “spring a patent on a mature industry,” “the predominant uses of continuing applications are totally appropriate.”

To address concerns about abusive use of the continuation process, several groups have proposed giving the PTO authority to promulgate regulations governing the circumstances in which continuation applications may be filed. One limitation would be restricting in certain ways the unlimited right to file continuing applications for patents.

In early January 2006, the PTO released a proposed rule to reform continuations practice. The PTO described the “crippling effect” of such applications on the PTO’s ability to handle new applications. The PTO proposes to require justification for filing of second and subsequent continuations and Requests for Continued Examination, thereby limiting the ability

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156 *Id.*

157 Griswold Statement, at 15; Trans. at 130 (Pinkos) (approximately one-third of applications involve continuations where the applicant did not initially prevail; there are “[l]ots of good reasons” for continuing applications).

158 *Id.*

159 IP Section White Paper, at 32-33.


161 *Id.* at 49; *see also* Trans. at 130 (Pinkos) (describing proposal at “pre-comment” stage).
of an applicant to file third and subsequent applications. This proposal was generally supported at the AMC hearing.\footnote{Trans. at 131 (Lemley) (endorsed proposal described by Pinkos “entirely,” as good resolution to concern applicants game the system by filing an endless number of continuations applications); \textit{see also} Trans. at 131 (DeSanti) (such reform would not reduce inventors’ incentives); Trans. at 131-32 (Detkin) (generally supportive).}

Neither the FTC Report not the STEP Report included a specific recommendation regarding this issue.

This issue is not specifically addressed in the Smith bill.

5. Institute post-grant review procedures. [FTC Rec. #1; NAS-STEP Rec. #2]

The patent application process is predominantly an \textit{ex parte} procedure that includes the participation of only the patent applicant and the examiner. Currently, there are limited procedures that allow third parties to participate in patent reexaminations, referred to as \textit{inter partes} reexamination proceedings. Although any person can initiate such a proceeding, this process is seldom used by third parties. The only other option for challenging a patent is litigation, and usually this is available only if the patent owner has threatened the potential challenger with patent infringement litigation. Such litigation is often extremely costly and lengthy.\footnote{FTC Report, ES at 7-8; \textit{id.} ch. 5, at 15-24; STEP Report, at 82, 95-103; AIPLA-FTC, at 2-4; AIPLA-STEP, at 14-20; IP Section-FTC, at 4-6; IP Section-STEP, at 15-17.}

Several groups proposed an enhanced administrative procedure for post-grant review of and opposition to patents (or “open review”), which would allow for more meaningful challenges to validity, although the proposals vary on the details.\footnote{FTC Report, ES at 7-8; \textit{id.} ch. 5, at 15-24; STEP Report, at 82, 95-103; AIPLA-FTC, at 2-4; AIPLA-STEP, at 14-20; IP Section-FTC, at 4-6; IP Section-STEP, at 15-17.} The main benefits of such a procedure include (1) it focuses on commercially important patents; (2) it is faster and cheaper than
litigation; (3) it provides more expert validity determinations; and (4) it could provide guidance
to examiners in evolving areas.\footnote{165}

A principal divergence among the various proposals for post-grant review concerns when the
procedure should be available. There was general agreement that there should be a limited
time for initiating a review after a patent issues, but disagreement over whether there should be a
second period for challenge after a party is put on notice that the patentee may assert the patent
against it.\footnote{166} Some argue that there should be only a single window after the patent issues.\footnote{167}
Otherwise, patents continue to remain subject to the risk of post-grant review, putting venture
capital funding at risk.\footnote{168} Others advocate two windows, a window directly after issuance and a
second window for some period after notice of alleged infringement.\footnote{169} A second window
avoids forcing firms to guess which of a multitude of patents will be asserted against them within
a short period after the patent issues.\footnote{170} There is general agreement that regardless of the precise
structure, the time and length of challenge must be limited.\footnote{171}

\footnote{165} Trans. at 111 (Merrill); \textit{see also} STEP Report, at 82, 95-103; FTC Report, ch. 5, at 19
(citing similar benefits).
\footnote{166} \textit{But see} AAI Comments, at 21 (questioning the consensus of the FTC and STEP reports
that the post-grant review process should only commence after the patent is granted, and arguing
instead that the opposition process to applications should be able to begin when the applications
are published 18 months after issuance).
\footnote{167} Written Testimony of Peter Detkin, Managing Director, Intellectual Ventures, LLC, at 10
(Nov. 8, 2005) (“Detkin Statement”); Stack Statement, at 5.
\footnote{168} Trans. at 158-59 (DeSanti).
\footnote{169} Lemley Statement, at 10; Trans. at 160 (Merrill).
\footnote{170} Lemley Statement, at 9-10.
\footnote{171} FTC Report ch. 5 at 23-24 & n.168 (FTC encourages “defined time limits,” but observed
that a one-year period might be “inadequate.”); IP Section White Paper, at 21-25 (stating the
importance of a limited window for seeking an opposition); \textit{see also} Trans. at 160 (Pinkos) (PTO
has not yet taken a position); \textit{see also} FTC Report ch. 5, at 23-24 & n.168 (citing, \textit{e.g.}, a PTO
strategic plan proposing a post-grant review process with two windows—one year after grant and
four months after “substantial apprehension” of being sued).
As part of their broader proposals, the following additional features of a post-grant review system were suggested:

- Strict time limits for decisions by the administrative patent judge.\textsuperscript{172}
- Sufficient safeguards to protect patent owners from harassment.\textsuperscript{173}
- Limits on discovery to keep down both the length of the proceeding and its cost.\textsuperscript{174}
- Use of a “preponderance of the evidence” standard in the opposition proceeding.\textsuperscript{175}
- Authorization of pre-grant submissions of prior art by third parties, removing the retroactivity restrictions on \textit{inter partes} reexamination, and removing the estoppel provision for \textit{inter partes} reexamination as it applies to issues that “could have been raised.”\textsuperscript{176}
- A bar on the PTO continuing post-grant review after a settlement is reached among the patent holder and challenger, because it would have a chilling effect on settlement and further burden the parties and PTO with unnecessary extended proceedings.\textsuperscript{177}

The Smith Bill submitted June 8, 2005, contains two windows—nine months after grant and six months after receipt of notice of infringement.\textsuperscript{178} However, the more recent iteration of the bill, the Amendment in the Nature of a Substitute, omits the second window.\textsuperscript{179}

\textsuperscript{172} AIPLA-FTC, at 3.
\textsuperscript{173} Id.
\textsuperscript{174} Id. at 4.
\textsuperscript{175} IP Section White Paper, at 21-25.
\textsuperscript{176} Id. at 25-27.
\textsuperscript{177} Id.
\textsuperscript{178} H.R. 2795, 109th Cong. § 323 (2005).
D. Patent Litigation

1. Modify or eliminate “subjective elements” in patent litigation. [FTC Rec. #9; NAS-STEP Rec. #6]

Certain “subjective elements,” such as the party’s state of mind at the time of the alleged infringement or at the time of the patent application, are potentially relevant to liability and damage determinations under U.S. patent law. Some have expressed concerns that litigating such matters unnecessarily increases the costs of patent litigation, while also decreasing the predictability of outcomes.\(^{180}\) Proposals for reform of three such aspects of patent litigation have been made: treble damages for willful infringement, the inequitable conduct defense, and the best mode requirement.

*Modify or eliminate treble damages for willful infringement.*

A court may award up to treble damages to patent holders when they establish that the defendant “willfully” infringed the patent.\(^{181}\) The premise for awarding enhanced damages to patent holders is deterrence, and the presumption that “without substantial additional risk deliberate infringement becomes more likely, since the potential infringer will ultimately pay the patent holder no more through litigation than through agreed license.”\(^{182}\) Concerns have been expressed that failure to obtain an opinion of counsel on non-infringement could give rise to an adverse inference of willful infringement.\(^{183}\)

\(^{180}\) See STEP Report, at 117-18; Trans. at 119 (Lemley) (patent system encourages abuse through “bizarre definitions of willful patent infringement”).

\(^{181}\) STEP Report, at 118.

\(^{182}\) Id.

\(^{183}\) Id. However, the Federal Circuit has addressed this issue recently in *Knorr-Bremese Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337 (Fed. Cir. 2004). See IP Section-FTC, at 27-29; IP Section-STEP, at 29-31.
Some have called for the elimination of the award of up to trebled damages for willful infringement.\textsuperscript{184} Enhanced liability for willful infringement has forced potential targets of infringement actions to acquire costly non-infringement opinions, or even intentionally avoid reviewing patents so that they will not have knowledge of them.\textsuperscript{185} Evidence that this rule deters infringement is lacking.\textsuperscript{186}

Others have advanced proposals to narrow the circumstances in which treble damages are available. Although they acknowledge that treble damages cause companies to avoid determining whether they are infringing patents, and even to avoid reading other firms’ patents, they believe that treble damages can increase incentives to enforce patents.\textsuperscript{187} One alternative is to require, as a predicate to prove liability for willful infringement, proof of either (1) actual, written notice of infringement from the patentee, or (2) deliberate copying of the patentee’s invention, knowing it to be patented.\textsuperscript{188} Other proposals include abolition of the rule that effectively requires accused infringers to obtain and then to disclose written opinions of counsel in order to avoid a finding of willfulness, and limitation of the inquiry into willful infringement to cases in which the defendant’s infringement is already established.\textsuperscript{189}

\begin{itemize}
\item \textsuperscript{184} Id. at 119-20.
\item \textsuperscript{185} Id.
\item \textsuperscript{186} Id.
\item \textsuperscript{187} FTC Report, ES at 16-17; id. ch. 5, at 28-31; see also AIPLA-STEP, at 27-32 (more studies needed before eliminating treble damages altogether).
\item \textsuperscript{188} FTC Report, ES at 16-17; id. ch. 5, at 28-31; STEP Report, at 119-20; see AIPLA-FTC, at 36-40 (agreeing with approach); IP Section White Paper, at 28-31 (proposes willful infringement limited to instances of improper conduct, such as intentional copying of an invention known to be patented, or failure to exercise due care after receiving a notice threatening suit for infringement).
\item \textsuperscript{189} STEP Report, at 119-20; see also AIPLA-STEP, at 28-30 (eliminate relevance of opinions of counsel in determining willfulness and limit inquiry until infringement established); IP Section-FTC, at 27-29; IP Section-STEP, at 29-31 (eliminate adverse failure to obtain advice of counsel and reform the scope and timing of the waiver of privilege when an attorney opinion
\end{itemize}
The Smith bill would create two requirements for treble damage liability under the doctrine of willful infringement, thereby increasing the burden of proving willful infringement. First, the defendant must receive from the plaintiff a notice of infringement letter that is sufficiently specific that the defendant can file a declaratory judgment action asserting its innocence before the defendant’s infringement can be found willful. Second, there must be a finding of infringement before willfulness can be plead and litigated.

Eliminate the defense of inequitable conduct.

If an alleged infringer can establish “inequitable conduct” by clear and convincing evidence, the patent may be unenforceable. Inequitable conduct on the part of the patentee may include making a material misstatement or omission in the course of prosecuting the patent application, with intent to deceive the PTO.

Some have called for elimination of the inequitable conduct doctrine, or alternatively, changes in its implementation. Establishing material misstatements with the intent to deceive

is relied upon in defense of a claim of willfulness; Lemley Statement, at 6-7 (proposing an objective reasonableness defense that would allow defendants to rely on strong arguments regarding non-infringement rather than having to waive privilege); cf. IP Section-FTC, at 27-28 (noting that the Federal Circuit in Knorr-Bremese Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp., 383 F.3d 1337 (Fed. Cir. 2004) remedied this problem to some extent);.


Id.; see also Lemley Statement, at 6-7.

Id.

STEP Report, at 121-22.

Id. One witness expressed his belief that “the Commission can make an important contribution to the debate over changes to the inequitable conduct defense by exploring the antitrust side of that interrelationship.” Trans. at 126 (Stack).

imposes high litigation costs; this defense is increasingly pleaded by defendants.\footnote{STEP Report, at 122-23; Trans. at 183 (Detkin).} Moreover, the doctrine is not needed, since there are sufficient alternative provisions to deter misconduct, including disciplinary proceedings and civil actions (including antitrust claims).\footnote{STEP Report, at 122-23.} Elimination of the defense would lead to the simplification of patent litigation and curb unproductive discovery and thereby reduce the cost of litigation.\footnote{Id. Some support for this was conditioned on the enactment of an administrative enforcement process within the PTO. AIPLA-STEP, at 33-34.} Others argue that eliminating the defense could encourage “unscrupulous applicants.”\footnote{Lemley Statement, at 4-5.}

In the alternative, several other reforms have been proposed, including ending the inference of intent from the materiality of the information that was withheld, providing for \textit{de novo} review by the Federal Circuit of district court findings of inequitable conduct, awarding attorney’s fees to a prevailing patentee, or referring cases to the PTO for reexamination and disciplinary action.\footnote{STEP Report, at 122-23; see also Trans. at 164 (Stack) (have questions addressed first by PTO administrative proceedings with no collateral estoppel effect in subsequent judicial proceedings). \textit{But see} Trans. at 162-63 (DeSanti) (given PTO’s existing difficult mission, policing fraud might be too burdensome).} One group proposed that courts focus on whether, “but for” the misrepresentation or omission, the PTO would have issued the patent, and that the entire patent not be rendered unenforceable where the misrepresentation was material only to some claims of the patent.\footnote{IP Section-STEP, at 32-34; see also IP Section White Paper, at 14-17 (suggesting, \textit{inter alia}, codifying the authority of the PTO enforce the “duty of candor and good faith”).}

The FTC Report did not include a specific recommendation regarding this issue.
The Smith bill would codify the patent applicant’s duty of candor, and would significantly limit the role of inequitable conduct in patent litigation.\textsuperscript{202}

Eliminate the “best mode” requirement.

Patent applicants must set forth the best mode contemplated by the inventor of carrying out the invention.\textsuperscript{203} The purpose of this requirement is to prevent inventors from applying for patents while at the same time concealing from the public preferred embodiments of their inventions that they have in fact conceived.\textsuperscript{204} Concerns have been raised that this requirement is costly to litigate and affords few benefits.

Several groups proposed the elimination of the best mode requirement.\textsuperscript{205} The proposals are based on the cost and inefficiency of this defense, its limited contribution to the inventor’s motivation to disclose beyond that already provided by the enablement provision of Section 112, its dependence on a system of pretrial discovery, its “inherent uncertainty,” and its inconsistencies with European and Japanese patent laws.\textsuperscript{206} Some called for this reform as part of a larger set of reforms.\textsuperscript{207}

The FTC Report did not include a specific recommendation regarding this issue.

\begin{itemize}
\item \textsuperscript{202} See H.R. 2795, 109th Cong. § 5 (2005) (providing that allegations of inequitable conduct would be decided in most instances at the PTO instead of at district courts, and the patent will be rendered unenforceable only if the conduct resulted in the issuance of one or more invalid claims in a patent).
\item \textsuperscript{203} 35 U.S.C. § 112; see STEP Report, at 120.
\item \textsuperscript{204} Id. at 120-21.
\item \textsuperscript{205} STEP Report, at 120-21; AIPLA-STEP, at 33, 42-44.
\item \textsuperscript{206} STEP Report, at 120-21; IP Section-STEP, at 32, 36-37; see also IP Section White Paper, at 12-13.
\item \textsuperscript{207} AIPLA-STEP, at 33, 42-44 (include change with first-to-file system and establishment of a post-grant opposition process); IP Section-STEP, at 32, 36-37 (part of broader harmonization reforms, citing the requirement’s “inherent uncertainty”).
\end{itemize}
The Smith bill would delete the “best mode” requirement from 35 U.S.C. § 112.\textsuperscript{208}

2. Adopt a preponderance of the evidence standard for invalidity. [FTC Rec. #2]

U.S. patent law confers a presumption of validity to a patent grant by the PTO. An alleged infringer challenging the patent must prove invalidity by “clear and convincing evidence.”\textsuperscript{209}

The FTC recommended that the validity of a patent be determined by a “preponderance of the evidence.”\textsuperscript{210} It argued that the heightened evidentiary standard of “clear and convincing evidence” is not justified in light of the current presumptions and procedures that favor the patentee before the PTO.\textsuperscript{211} For example, the PTO’s determinations supporting issuance of patents are based only on a preponderance of the evidence. Also, these determinations are made under tight time constraints, on an \textit{ex parte} basis, applying presumptions favorable to the applicant.\textsuperscript{212} CCIA also argues that the presumption of validity should be adjusted because an “artificially high presumption of validity provides unwarranted and dangerous leverage to holders of questionable patents.”\textsuperscript{213}

Two groups argue for retention of the current clear-and-convincing standard.\textsuperscript{214} The argument for lowering the challenger’s burden appears to result from an erroneous view that the doctrine is based in deference to administrative agencies, rather than a patent rule regarding the

\textsuperscript{208} See H.R. 2795, 109th Cong. § 4 (2005).
\textsuperscript{209} See FTC Report, ES at 9; \textit{id.} ch. 5, at 26-28.
\textsuperscript{210} \textit{Id.}
\textsuperscript{211} \textit{Id.}
\textsuperscript{212} FTC Report, ch. 5, at 28.
\textsuperscript{213} CCIA Comments, at 2.
\textsuperscript{214} AIPLA-FTC, at 6-16; IP Section-FTC, at 7-9.
proof of facts used to establish invalidity.  

Furthermore, the standard applies only to the proof of predicate facts, and not to the persuasive force of such facts in establishing invalidity. 

Accordingly, ensuring that the Federal Circuit consistently applies the clear-and-convincing-evidence standard only to the proof of predicate facts, and not to the legal conclusion of invalidity, should resolve the FTC’s concerns.

The STEP Report did not include a specific recommendation regarding this issue.

This issue is not specifically addressed in the Smith bill.

3. Protection of certain uses from infringement claims. [FTC Rec. #8; NAS-STEP Rec. #5]

There are two proposed reforms that involve limited protection of two types of uses from patent infringement claims: experimental and research uses, and intervening or prior use rights against claims added to continuing applications.

Experimental and research uses.

The Federal Circuit recently ruled that even noncommercial scientific research enjoys no protection from patent infringement liability. Prior to this ruling, it had been widely assumed by academic investigators and research administrators that the common law research exception to patent liability shielded scientific investigations at universities from lawsuits.

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215 AIPLA-FTC, at 6-16.
216 IP Section-FTC, at 7-8; see also IP Section White Paper, at 50-51.
217 IP Section-FTC, at 16.
219 STEP Report, at 108-09.
Several groups have advocated for some level of protection for non-commercial use of patented inventions.\textsuperscript{220} Such “experimental use” protection is needed to protect the freedom to work on a patented invention and to conduct fundamental research (particularly in biotechnology).\textsuperscript{221} One group suggested that the exemption should be for \textit{bona fide} research, and not depend upon drawing a difficult line between non-commercial and commercial entities.\textsuperscript{222}

The FTC Report did not include a specific recommendation regarding this issue.

This issue is not specifically addressed in the Smith bill.

\textit{Intervening or prior use rights}.

Applicants can delay the examination process while other companies continue to invest in technologies that will infringe the patent when issued, as discussed above regarding proposals to require publication of patent applications after 18 months. Although requiring publication of patent applications after 18 months reduces this problem, applicants may amend their claims during the examination process to cover third parties’ technologies after those parties have made significant investments.\textsuperscript{223}

To address the issue, some have proposed protection from infringement claims for parties who use (or prepare to use) a technology prior to the first publication of the relevant patent claims in a continuing application.\textsuperscript{224} This helps protect investments and legitimate expectations

\textsuperscript{220} \textit{Id.} at 82; AIPLA-STEP, at 23-27; IP Section-STEP, at 24-27; AAI Comments, at 21-22.
\textsuperscript{221} STEP Report, at 110-11. One proposed alternative is for the Office of Management and Budget (“OMB”) to adopt rules to shift patent infringement liability from federally funded research institutions to the federal government, in order to ensure research tool access for certain researchers. STEP Report, at 115-17. This proposal was opposed by at least one group. AIPLA-STEP, at 23.
\textsuperscript{222} IP Section-STEP, at 24-27.
\textsuperscript{223} \textit{See} FTC Report, ch. 4, at 28-31.
\textsuperscript{224} FTC Report, ES at 16; \textit{id.} ch. 4, at 28-31.
of parties. Under one version of this approach, such prior user rights would be provided only if the third party used the product or process prior to the filing date of the application in question.

Some contend that these concerns are better addressed by other means.

The STEP Report did not include a specific recommendation regarding this issue. The bill that Rep. Smith introduced on June 8th included a provision creating prior user rights in certain circumstances, but this provision has been omitted from more recent versions.

4. Standards for injunctive relief in patent litigation.

Much attention and concern has been directed towards “patent trolls,” who allegedly collect patents, often of dubious merit, without intending to practice them but rather bring infringement claims and use the threat of enjoining the defendant’s business to secure settlements. Several witnesses expressed concern that defendants could be held up for large awards, especially where “patent thickets” result in a product reading on a large number of patents. The originator of the “patent troll” term argued that the phase has become “almost equivalent to a plaintiff you don’t like.” He claimed that the problem is more anecdotal that...

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225 Id. ch. 4, at 28-29; see also AIPLA-FTC, at 35 (publication of applications reduces but does not eliminate the problem of surprise).
226 AIPLA-FTC, at 35.
227 See IP Section-FTC, at 25-26; cf. IP Section White Paper, at 35-37 (advocating the expansion of existing statutory prior user rights to include all categories of patented subject matter).
228 See H.R. 2795, 109th Cong. § 8 (2005); see also Amendment in the Nature of a Substitute to H.R. 2795.
229 Lemley Statement, at 1; Trans. at 113-14 (Detkin).
230 Trans. at 79 (Gilbert); Trans. at 80 (Shapiro); see also FTC Report, ES, at 6-7; STEP Report, at 10.
231 Trans. at 113-14 (Detkin).
real, and, in particular, that firms are not generally being put out of business through the threat of injunction in patent litigation (pointing specifically to the Blackberry case).\textsuperscript{232}

A related concern is that these plaintiffs may wait until another firm has made significant investments before perfecting a patent and suing.\textsuperscript{233} The ability of such plaintiffs to extract large settlements is enhanced by the threat that they can obtain an injunction and shut down the defendant’s business.\textsuperscript{234}

A number of observers contend that the Federal Circuit has made permanent injunctive relief effectively automatic if a patent is found valid and infringed, increasing a plaintiff’s leverage.\textsuperscript{235} Others argue that the right to exclude is the fundamental patent right, and that the Federal Circuit has correctly applied equitable principles in setting the standards for permanent injunctive relief in patent cases.\textsuperscript{236} The Supreme Court recently addressed this issue in \textit{EBay, Inc. v. MercExchange, LLC.}\textsuperscript{237} In \textit{EBay}, the Court rejected a “categorical” rule for patent cases that would grant preliminary injunctions once validity and infringement were established, and held that the traditional considerations in cases seeking injunctive relief should be applied in patent cases as well.\textsuperscript{238}

\begin{footnotesize}
\begin{enumerate}
\item[232] Id. at 116 (Detkin); Detkin Statement, at 7-8.
\item[233] FTC Report, ES at 16.
\item[234] Id. ch. 2, at 28-29.
\item[235] Trans. at 133 (Lemley) (“The problem is that the Federal Circuit has changed ‘may’ to ‘shall’ grant injunctions, regardless of principles of equity, leaving only one exception . . . for public health”); accord Trans. at 135 (DeSanti).
\item[236] Trans. at 134 (Detkin) (challenging claim that Federal Circuit has made injunctions “effectively mandatory”).
\item[237] 126 S. Ct. 1837 (2006).
\item[238] Id. at 1840.
\end{enumerate}
\end{footnotesize}
Two groups oppose diminishing the patent owner’s right to a permanent injunction. Such a reduction would “devalue” the patent right and be especially harmful to independent inventors. The right to a permanent injunction is fundamental to the patent grant and that compulsory licensing is contrary to the injunctive right. Moreover, current law authorizes courts to deny permanent injunctive relief in appropriate cases, while at the same time recognizing such relief as a fundamental right of patent holders, and that current law adequately provides for stays of permanent injunctions pending appeal in appropriate cases.

One middle ground proposal derives from the recognition that “[i]t is important to preserve the right of injunctive relief in the case of legitimate patent claims, while preventing those who abuse the system [e.g., patent trolls] from using the threat of injunctive relief to extort money from legitimate innovators.” Accordingly, one solution is to consider, among other factors, the relative contribution of the patented invention to the defendant’s product.

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239 IP Section White Paper at 43-49; Patent Act of 2005: Hearing Before the H. Subcomm. on Courts, the Internet & Intell. Prop., 109th Cong. 14 (June 9, 2005) (statement of Gary Griswold) (“Griswold Statement”) (AIPLA “strongly opposes” the provision directing courts to “consider the fairness of the remedy” in determining whether to grant a permanent injunction, arguing that it “would reduce, to some unknown degree, the possibility of patentees obtaining permanent injunctions.”).

240 Griswold Statement, at 14.

241 IP Section White Paper, at 43-46.

242 Id. at 46-49.


244 Id.; Trans. at 140-41 (Lemley) (limiting relief to damages is appropriate in certain cases). Professor Lemley words it as follows:

In determining the right to injunctive relief of a patent owner who does not participate in the market for a patented invention against an infringer who did not act copy the invention from the patentee or otherwise act willfully, the court shall consider, where relevant and among other factors, the portion of the defendant’s product that constitutes the inventive contribution as distinguished from other features of the product or improvements added by the infringer.
agreed that this proposal was “a sensible policy recommendation,” but expressed concern that it could lead to “a permanent mandatory licensing regime,” thereby limiting an IP holder’s right to refuse to deal.\textsuperscript{245} Permitting the defendant time to invent around the patent, and using the relative contribution instead for determining reasonable royalties, would alleviate these concerns.\textsuperscript{246}

These varying views may in part be attributable to the fact that the patent system works differently in different industries. Whereas computer, semiconductor, and telecommunications companies may have products that are potentially covered by thousands of patents, pharmaceutical companies’ patents may be covered by only a very few (or just one) patents. Therefore, concerns regarding “patent thickets” are much more likely to arise in the former group than the latter.\textsuperscript{247}

Neither the FTC Report nor the STEP Report included a specific recommendation regarding this issue.

The Committee Print version of the bill circulated in April 2005 by Rep. Smith included a provision stating that injunctions would not be granted in infringement actions unless “the patentee is likely to suffer irreparable harm.”\textsuperscript{248} The June 8 bill included a provision that generally directed courts, when weighing injunctive relief in patent cases, “to consider the fairness of the remedy in light of all of the facts and the relevant interest of the parties associated

\textsuperscript{245} Trans. at 80-81 (Shapiro).
\textsuperscript{246} \emph{Id.} Witnesses were generally opposed to considering whether defendants had conducted patent clearance studies in determining whether an injunction should issue. Trans. at 146 (Detkin) (such evidence most relevant to determining whether infringement was willful); Trans. at 147 (Lemley) (conducting patent clearances might justify “reduced damages or reduced remedies”).
\textsuperscript{247} \textit{See} Lemley Statement, at 1-2.
with the invention.”

It also added new language explicitly directing courts to stay an injunction pending appeal upon an affirmative showing that the stay will not result in irreparable harm to the patent owner and that the balance of hardships does not favor the patent owner.  

On July 26, 2005, Rep. Smith circulated a substitute bill, the Amendment in the Nature of a Substitute, which removed the injunctive relief provision in its entirety.

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250 See id.