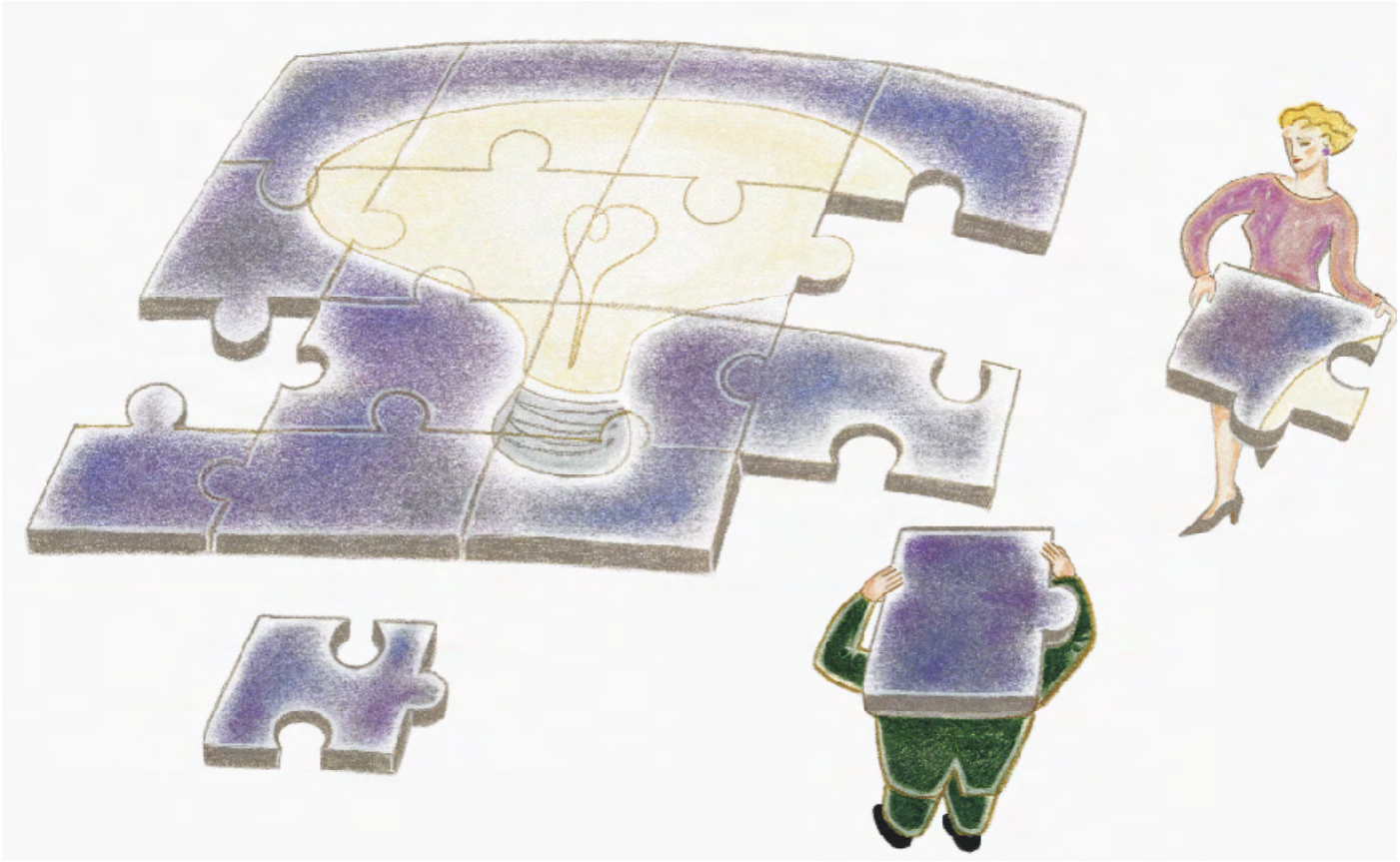
Our Uniform Patent System

By Clarisa Long



The Call for Patent Reform

For once, U.S. high-technology industries across the board agree on something: the need for patent reform. The number of patent applications has increased dramatically in the past decade, as has the number of patents granted. In addition to patenting more traditional inventions like widgets, patentees are receiving protection for subject matter ranging from software to tax strategies to small snippets of genetic material. Patentees are enforcing their rights more often and more vigorously. The U.S. Patent and Trademark Office has found itself under increasing pressure to keep up and minimize backlogs and lengthy delays. Last term, the Supreme Court granted certiorari on the largest number of patent cases in many years—an indication that this normally esoteric legal specialty is gaining wider notice. Patent reform is stirring the passions these days.

Many observers argue that the quality of issued patents has slipped, particularly in the information technology fields. The resulting system, critics claim, invites excessive litigation and abuse of the legal system, results in excessive damage awards for patent infringement, and puts the United States at odds with the patent systems of other countries. In their book *Innovation and its Discontents*, Adam Jaffe and Josh Lerner, professors at Brandeis University and Harvard Business School, respectively, argue that the patent system in recent years has come to hinder rather than spur innovation and economic productivity.[1] James Bessen, a lecturer at Boston University School of Law says, "Today, over all, patents don't work; for the information technology industry especially, they don't work."[2] The National Research Council of the National Academy of Sciences, in its study, "A Patent System for the 21st Century," put it a bit more tentatively but no less damningly: "The direct costs of the patent system are significant, increasing, and in some cases may adversely affect innovation."[3]

Even "Big Tech" industries—indeed, especially Big Tech industries—are up in arms. Microsoft has been critical of the patent system. David Kaefer, director of intellectual property licensing for Microsoft, has famously said, "We really feel that there's a litigation lottery. People roll the die and hope that their number comes up big." Sanjay Prasad, Oracle's chief patent counsel, has argued that infringement

lawsuits result in awards of excessive damages. "No reasonable business person would ever agree to" pay such amounts in licensing fees, says Prasad. "There's a large distortion between the value provided realistically, and how that comes out in court."

"We need to ensure that high-quality patents are approved and low-quality patents are not," says Brad Smith, Microsoft's general counsel. "Our patent system is badly in need of repair," agrees Rep. Howard Berman (D-Calif.). "Patents of poor quality are being granted, and rising costs and lengthy litigation are damaging to innovation and creativity."

Unfortunately, that's where the agreement about patent reform ends.

Different sectors and industries have varying ideas of what kinds of reform ought to occur. Generally speaking, software and other Big Tech industries want broader revisions of the patent statute, whereas the "Big Pharma" sector does not. According to Alan Fisch, a patent litigator with Kaye Scholer in Washington, D.C., patent reform "has pitted two of the leading technology sectors against one another, specifically the computer industry versus pharmaceutical industry,"[4] Each of these sectors of the technological community uses the patent system differently. We've long known that different industries attach varying values to patents and use the patent system in different ways.[5] Many technological sectors do not primarily rely on patents in order to capture the value of their inventions. Instead, they use patents defensively or as assets to bring to the table in a cross-licensing negotiation.[6] This is not because the patent system was designed to favor one industry or another—it wasn't—but because different technologies are best suited for protection under different legal regimes. Industries that have low research and development costs, or whose products become obsolete rapidly, or whose products are naturally difficult for competitors to copy will not be so dependent on the patent system to recoup their investments as industries with relatively low costs for creating new products, or whose products become obsolete slowly, or whose products are easy to duplicate.

Take software as an example. The cost of much innovation in software today is relatively low when compared with the cost required by other industries, which means that independent inventors do not need the resources of large firms to invent products or processes. Innovation in the industry is typically a cumulative process. Each consumer product is likely to be covered by multiple patents, which makes it more difficult to build a defensive barrier of patents around a single product. As Professor Ronald Mann of Columbia Law School was told when he interviewed executives in the software industry, "[I]n software it is so easy to change things that it is so easy to do the same function, but do it in a different way."[7] Because of the nature of research and development in the software industry, Mann finds, "competitors usually could, without infringing a patent, implement most of the aspects of a patented software product."[8]

Because independent inventors and programmers sometimes file for patent protection on software and other inventions also used by information technology firms, large information technology firms can find themselves ending up as defendants in patent infringement lawsuits. Microsoft's Brad Smith has said that his company spends "close to $100 million annually to defend against an average of 35–40 patent lawsuits simultaneously." Often the patent being enforced covers only a small part of the allegedly infringing product. The Coalition for Patent Fairness—whose members include Apple, Cisco, Microsoft, Sun Microsystems, Applied Materials, Chevron, Time Warner, and Visa—says, "These complex cases cost millions in legal bills and can coerce large settlements that cost upwards of $100 million or much more for claimed 'inventive contributions' that represent a miniscule [sic] part of targeted products."[9]

By contrast, pharmaceutical companies are more often plaintiffs who are trying to enforce their patents against manufacturers of generic products. It's no surprise that patents make up a significant portion of drug companies' assets and that the pharmaceutical industry views patents as critical to its business model. Pharmaceutical research is a high-cost, highly uncertain process, with a final product that is cheap to reverse engineer, copy, and mass produce. Only a few patents typically cover an end product. It often will be quite easy to determine if a competing pharmaceutical infringes a patent, because it will be easy to identify the precise compound that the pharmaceutical contains.

The same model applied to biotech companies as well. A biotech start-up company can build a defensible barrier around its product with one patent or only a few patents on the relevant composition or process. Thus, like pharmaceutical companies, a biotech start-up can more readily use patents to appropriate the value of its invention than software firms.

Patent reform arouses passions among the affected industries, whether they are plaintiffs or defendants, willing users or unwilling participants in the patent system. The key question, therefore, is: How should we structure the patent system in order to best promote innovation in the U.S. economy?

Patent Reform Efforts

As laws go, the statute governing U.S. patents has remained relatively stable since patent law was comprehensively codified in 1952. Sooner or later, that will change. The Patent Reform Act of 2007 (H.R. 1908) was passed by the U.S. House of Representatives on Sept. 7, 2007, by a vote of 220 to 175.

"This legislation is designed to improve patent quality, deter abusive practices by patent holders, provide meaningful, low-cost alternatives to litigation for challenging the patent validity and harmonize U.S. patent law with the patent law of most other countries," said Rep. Berman, the chief sponsor of the Patent Reform Act of 2007. "This is a controversial and complex bill that makes substantial changes to the U.S. patent system. … Many commentators have described these changes the most significant since the 1952 patent act. Naturally, the magnitude of changes contemplated by this act has given pause to most users of the patent system—as it should. But fear of change is no

reason not to fix what obviously are serious problems in the patent system."[10]

A similar bill is on the Senate's calendar. Both bills propose significant changes to the patent statute. Some of the changes in the House's bill include the following:

- **Moving to a "first-to-file" system:** Currently, the United States is the only country to award patent rights to the first person to invent a technology, rather than the first person to file for protection. Moving to a model that awards patent protection to the first applicant would harmonize the U.S. patent system with that of the rest of the world. The first-to-file provisions would not go into effect immediately, however.

- **New methods for calculating patent infringement damages:** At present, U.S. patent law allows a patent holder to collect damages adequate to compensate for the infringement, but in no event less than a "reasonable royalty."[11] Currently, this reasonable royalty calculation may be based on the value of the entire infringing device, including unpatented components.[12] The House and Senate bills set out several methods by which to calculate a reasonable royalty, tip the analysis in favor of limiting damages to the proportionate value of the patent to the invention, and reduce the number of factors that a court may consider when determining the royalty. The proposed legislation does not change the patentee's ability to recover profits lost as a result of the infringement.

- **Changed standard for receiving damages for willful infringement:** Under current law, a trial court "may increase the damages up to three times the amount found or assessed" if it finds that the defendant willfully infringed the patent.[13] The proposed reforms would make it more difficult for a patentee to recover damages for willful infringement by giving defendants the opportunity to escape a finding of willful infringement if they had an "informed good faith belief that the patent was invalid or unenforceable, or would not be infringed by the conduct later shown to constitute infringement of the patent." The U.S. Court of Appeals for the Federal Circuit in Washington, D.C., the appellate court with exclusive jurisdiction over patent appeals, recently raised the standard for finding willful infringement, however, in *In re Seagate Technology LLC*. That case held that "proof of willful infringement permitting enhanced damages requires at least a showing of objective recklessness."[14] The *Seagate* standard is different from the standard in the proposed House bill, which is one of due care.

- **A new administrative mechanism by which to challenge issued patents:** The legislation proposes to create a "post-grant opposition" board that would be part of the U.S. Patent and Trademark Office. This mechanism is designed to be faster and cheaper than a legal challenge through the courts. Patents being challenged in a post-grant opposition would not have a presumption of validity, in contrast to the statutory presumption of validity that patents currently get in litigation.[15]

- **Limits on the courts where patent cases could be filed:** Certain district courts, such as the Eastern District of Texas, have earned a reputation for being patent-friendly, causing a disproportionate number of patent litigation suits to be filed there in recent years. The proposed reform requires cases to be filed in those districts where the defendant has a "principal place of business" or has committed the majority of its infringement.

According to Rep. Lamar Smith (R-Texas), the bill "is not intended to favor the interests of one group over another. It does correct glaring inequities that encourage individuals to be less innovative and more litigious." Regardless of what the proposed reform may have intended, the simple fact is that the bill does favor some interests over others.

Take the provisions regarding calculation of damages and willfulness, for instance. Groups representing the information technology sector, such as the Business Software Alliance, favor the new damages provisions. These groups claim they often end up as defendants accused of having infringed patents whose value constitutes a small part of the final product. It's not clear how often this happens, but a salient example is the $1.52 billion judgment against Microsoft in *Alcatel-Lucent v. Microsoft*, which is the biggest patent infringement award ever handed down by a jury. The software found to be infringing was Microsoft's Windows MediaPlayer, but the jury calculated damages on the basis of the entire cost of a personal computer. (Judge Rudi Brewster ultimately overturned the jury's damages verdict and granted a new trial to determine damages, however.) The Big Tech sector claims that patentees can hold defendant firms hostage and can threaten to shut down the production of an entire product line when only one part of the product infringes the patent. According to Mary E. Doyle, senior vice president and general counsel of Palm Inc., the existing damages structure allows patent speculators to use the threat of a lawsuit to force infringement defendants "to license patents at rates that greatly exaggerate the contribution of the patented invention."[16]

Critics of the damages provisions maintain that preliminary injunctions and the threat of a large damage award are the only leverage a small patentee has against a large corporation in a licensing negotiation. They argue that the proposed changes undercompensate plaintiffs for the actual harm caused by the infringement and do not adequately cover the research and development costs that went into the invention. To the extent that opponents' concern is about excessive damages awards, they point out, courts can act as a check on juries to make sure that damages awards are not excessive. They cite Judge Brewster's overturning of the jury's damages verdict and the granting of a new trial to determine damages in *Alcatel-Lucent v. Microsoft* as an example. Bruce Sewell, senior vice president and general counsel of Intel Corporation, concedes the point. "In the case of bio and pharma, more patents are critical patents,

and the judge should instruct the juries accordingly. In the high-tech industry, most patents that are litigated are not critical patents," he says.[17]

Chief Judge Paul Michel of the Court of Appeals for the Federal Circuit has expressed concern that the proposed damages provisions would require analysis of damages "that would be extremely costly and time consuming, far more so than current application of the well-settled apportionment law. Resulting additional court delays would be severe, as would additional attorneys' fees and costs."[18] "If the House Judiciary Committee intends to continue the damages law as currently practiced, after decades of refinement in individual court decisions, it need do nothing," states Chief Judge Michel. "This body of law is highly stable and well understood by litigators as well as judges."

Another provision causing dissension in the technological communities is the post-grant opposition proceeding. Eliminating the presumption of validity for a patent in such a proceeding would make it easier for poor-quality patents that have been issued to be invalidated, which pleases the Big Tech firms, because they believe they are plagued with threats of lawsuits from holders of poor-quality patents. Not surprisingly, the Big Pharma sector argues that a post-grant opposition procedure would create uncertainty about the validity of issued patents, which would make it more expensive for patent owners to enforce their patents against infringers and defend themselves against challenges.

Big Tech firms supporting the legislation include Microsoft, Apple, Google, and Cisco, along with trade associations such as the Software & Information Industry Association, the Business Software Alliance, the Computer & Communications Industry Association, and the Computing Technology Industry Association. Groups expressing reservations include the Innovation Alliance, the Coalition for Twentieth Century Patent Reform, and the IEEE-USA (a trade organization representing electrical engineers and related professions). "We believe that much of the legislation is a disincentive to inventiveness, and stifles new businesses and job growth by threatening the financial rewards available to innovators in U.S. industry," said IEEE-USA in a written statement. "IEEE-USA believes that, left as is, the patent reform legislation will create an environment that is harmful to individual inventors and small businesses."

Opponents of the proposed reforms say that reforms go too far, weakening the value of patents and making them easier to challenge. "It's almost everything an infringer could ever want," says Phil Johnson, the chief patent attorney for Johnson & Johnson. Advocates of the proposed provisions beg to differ. "Nothing in the Senate bill reduces the incentives for innovation. The pharma/biotechs are not facing problems with patent speculators," says Intel's Sewell. "There is a small cottage industry of secondary markets for patents that exists primarily to generate income in ways not contemplated by the Patent Act. These are warehouse patents. The proposed patent reform changes concerning litigation are an attempt to rebalance. They do not affect all sectors."[19]

In addition, Senators Carl Levin (D-Mich.), Norm Coleman (R-Minn.), Barack Obama (D-Ill.), Ken Salazar (D-Colo.), and Sheldon Whitehouse (D-R.I.) have proposed legislation that would affect tax patents.[20] The Stop Tax Haven Abuse Act, which was introduced on Feb. 17, 2007, includes a provision to amend the patent law to prohibit patents for any invention "designed to minimize, avoid, defer, or otherwise affect the liability for Federal, State, local, or foreign tax." A similar bill has been introduced in the House by Rep. Lloyd Doggett (D-Texas).

Tax patents "limit the ability of taxpayers to utilize fully interpretations of tax law intended by Congress," states the American Institute of Certified Public Accountants, which believes such patents "undermine the integrity, fairness and administration" of the tax system.[21] Not everyone agrees. "We need to draw a distinction between the granting of patents to tax products or strategies that are in compliance with the tax laws, and to abusive tax shelters or other products that may not be. On the one hand, the ability to obtain a patent could encourage the development of products to help people comply with the tax law, similar to other protections of commercial interests such as trademarks and copyrights," testified Mark Everson, commissioner of the Internal Revenue Service, before the House Committee on Ways and Means.[22] At the same time, he noted, "Granting patent protection to such strategies could limit the use of that particular tax strategy by other taxpayers and have a negative impact on their ability to comply with the tax law."[23]

Keeping A Uniform Patent System

This is not the first time in recent years that Congress has considered patent reform. For the past three years in a row, patent reform bills have languished in Congress. As patent reform efforts appear likely to come to fruition this year, now is a good time to take a step back from the nitty-gritty of the statute and reflect on the larger picture. As Nicholas P. Godici, comissioner for patents at the U.S. Patent and Trademark Office, testified before the Senate Finance Committee in 2004, the patent system is "technology neutral and there shall be no disparate treatment for different categories of inventions."[24] He credited much of the success of the patent system to the "uniformity and flexibility" of patenting standards.

Because different industries have different experiences with the patent system, however, some commentators are calling for patent law to be rewritten in a way that is more industry-specific. The fundamental rules of patent law were created—mostly by the courts—in a world of mechanical inventions. The continued application of these rules to new technologies is not free from controversy. Although the Patent Act is technologically capacious, some commentators believe that new rules should be created for new classes of inventions.[25] Others are more cautious. "Given the heterogeneity of inventive resources and opportunities, no one-size-fits-all system of protection can achieve 'first best' optimality," argues Professor Peter Menell, of the University of California, Berkeley, in a recent paper. "A uniform patent system that applies to all fields of technology will undoubtedly be both under and over-inclusive. On the other hand, administrative and political constraints caution

against significant discretion in the granting and tailoring of patent protection. Thus, the efficacy of the patent system depends on the extent to which rules of general applicability can distinguish among varying circumstances."[26]

"The law does not differentiate the scope or duration of rights granted on the basis of subject matter, level of investment, or any other metric," says Professor Michael Carroll

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of the Villanova University School of Law in a recent article.[27] "Perfect tailoring of entitlements in patent and copyright law would be theoretically optimal if granting exclusive rights were the only policy tool available to respond to appropriability problems."[28] Professors Dan Burk and Mark Lemley of the University of Minnesota Law School and Stanford Law School, respectively, argue that the costs of having a uniform patent system are particularly high for the biotechnology and software sectors, and that these costs are can be reduced by applying patent law differently to each of these industries.[29] In their article, "Policy Levers in Patent Law," Burk and Lemley propose various technology-specific adjustments to the patent system.[30]

At present, the patent statute does provide for some technology-specific variation and exempts certain groups from liability, but these are the rare exceptions rather than the rule.[31] For instance, medical practitioners and health care entities are exempt from liability for patent infringement that involves "medical activity" such as the "performance of a medical or surgical procedure" on a "human body, or organ cadaver, or a nonhuman animal used in medical research or instruction."[32]

Exemptions, privileges, and technology-specific or industry-specific provisions should remain rare. Congress should continue to adhere to a unitary patent system. Much hangs in the balance, and mistakes at the statutory level will be hard to repair. Professors Burk and Lemley concede that the legal system has been able to achieve tailoring through the courts, even with a uniform statute. "As a practical matter, it appears that although patent law is technology-neutral in theory," they conclude, "it is technology-specific in application."[33]

The provisions in the pending patent reform legislation aren't overtly industry-specific. But many of them—such as the damages provisions, the post-grant opposition provisions, and venue limitations, to name a few—benefit some industries far more than they benefit others. Similarly, the provisions of the pending legislation to prohibit patents on tax strategies are as industry-specific as you can get without explicitly coming out and saying so.

We should be wary of provisions that are designed to protect and benefit specific industries. Provisions directed at specific technologies or industries make it easier for incumbent industries to create barriers to entry for new players or firms in the marketplace. We want technology to evolve. Obsolescence of an old technology is a good thing. Legislation that solidifies the position of incumbents makes it more difficult for new technologies to emerge.

Historically, firms haven't sought amendments to the Patent Act as a means of keeping new entrants out of their markets or making life difficult for their competitors. But the patent statute would be a very good place to attempt such anticompetitive moves. Before you think that's far-fetched, take a look at the Copyright Act, an example of what can happen when we create special exemptions and other industry-specific legislation. The Copyright Act is studded with exceptions, privileges, and special provisions designed to benefit all sorts of entities and interest groups, such as broadcasters, libraries, schools, churches, veterans' groups, fraternal organizations, agricultural fairs, stores that sell music, small shops, restaurants—and the list goes on.

Professor Tim Wu of Columbia Law School has demonstrated that the Copyright Act has long been used for anti-competitive purposes by incumbent firms and industries that wanted to maintain their market position at the expense of new technologies. The Copyright Act "evolved through a series of long and extensive conflicts between competitive rivals, such as cable and broadcast, radio and song-writers, and the early recording players and sheet music publishers," he says. "The law has played a recurring role in competition between incumbent and challenger disseminators."[34] "Throughout its history, copyright law has had difficulty accommodating technological change," agrees Professor Jessica Litman of the University of Michigan Law School.[35] "The nature of the legislative process we have relied on for copyright revision is largely to blame for those laws' deficiencies."[36] She lays the blame squarely at the feet of the copyright code's industry-specific nature and the interest-group-driven legislative process of copyright reform. "Industries for whom the old law worked well sought to retain their advantages; industries that found the old law inadequate sought profound changes in the way the copyright statute treated them. Affected interests compromised their disputes by treating different industries in disparate ways."[37]

"The decisions about who is entitled to deal with copyright on special terms," Litman adds, "get made either because of sheer bargaining power or because of exogenous political determinations made in connection with unrelated issues."[38] As we've learned from other legislative fixes, such as compulsory licenses in copyright law, legislative "lock-in" can become a problem very quickly. Interested parties can spend enough to veto a change in legislation once they've gotten Congress to adopt the rules they want. Spe-

cial rules for each industry run the danger of defining a market that will be difficult to change.

I am not arguing that patent rules should be applied to all technologies in the same away at all times. Rather, I'm arguing that industry-level differentiation should not be written into the statute. Tailoring application of the rules to the circumstances has its place, but Congress shouldn't be the one doing the tailoring.

Industry-specific provisions have a heightened risk of running afoul of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement) as well. The TRIPs Agreement—the international patent treaty strongly supported by the United States in the international community just over a decade ago—mandates minimum levels of substantive patent protections for a wide range of inventions.[39] Under the TRIPs Agreement, member states of the World Trade Organization are not allowed to exclude any field of technology from patentability.[40] Article 27 of the agreement requires that "patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. … [P]atents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced."[41]

Any attempt to prohibit patents on tax strategies would need to address the issues raised by the TRIPs Agreement. Patents on tax strategies are a subcategory of patents on business methods. Legal experts disagree as to whether business methods as a class can legitimately be excluded from patent protection altogether under the TRIPs Agreement. This sticking point arises because it's not clear that business methods constitute technologies "capable of industrial application," as required by the agreement.[42] Some members of the World Trade Organization do disallow patents on business methods.[43] If business methods are not "capable of industrial application" then they can legitimately be excluded en masse from patent protection—and, by extension, so can patents on tax strategies—without running afoul of the TRIPs Agreement. But if business methods are "capable of industrial application"—which means they meet the utility standard of § 101 of the Patent Act—then a blanket prohibition on tax patents could run into problems under the TRIPs Agreement.

The same might be said of a unitary patent system that Winston Churchill famously said about democracy: It's the worst form of patent system, except for all the others that have been tried.

Let's remember that the inputs need to be fixed as well. It's a no-brainer that we need to put better processes in place to help identify bad patent applications before they are issued patents. At the front end, that means putting better tools at the disposal of patent examiners to allow them to detect good patent applications. That also means changing the incentives examiners have so that their productivity is measured by more than the amount of applications they process. Examiners in many technological departments, called "art units," within the U.S. Patent and Trademark Office work under tight time constraints. With their productivity measured by the rate at which they dispose of applications, examiners have an incentive to approve marginal or even weak patent applications.

Conclusion

Patent law is having a broad impact on our economy and on society today. In this time of rapid technological innovation and social change, discussion and review of the patent system are a healthy part of any innovation policy. Despite their differences on a host of issues in patent reform, the players all share a fundamental belief in the power of the patent system to affect innovation and technological change. They may disagree on the nuts and bolts of reform, but they agree on the importance of getting it right.

In the words of Professor Jessica Litman, referring to the history of the copyright statute, "We haven't taken the luxury of enough time to craft legislation so that it will actually be useful rather than pernicious."[44] Congress should take the time to make sure that patent reform doesn't create more problems than it solves. **TFL**

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Endnotes

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[39]*See* Agreement on Trade-Related Aspects of Intellectual Property Rights [TRIPs], Including Trade in Counterfeit Goods, Dec. 15, 1993, 33 I.L.M. 81 (1994), Art. 27(1) (entered into force Jan. 1, 1995).

[40]*Id.*

[41]Article 27(1) allows the terms "inventive step" and "capable of industrial application" to be synonymous with the terms "nonobvious" and "useful," respectively.

[42]*See* William A. Drennan, *The Patented Loophole: How Should Congress Respond to This Judicial Invention*, 59 Fla. L.R. 229, 268–271 (2007) (summarizing the debate).

[43]*See* Paul Goldstein, International Intellectual Property Law 303, 308–309 (2001).

[44]Jessica Litman, *War and Peace: The 34th Annual Donald C. Brace Lecture*, 53 J. Copyright Soc'y U.S.A. 1, 6 (Fall 2005–Winter 2006).