

A New Technology Protection*

Lee A. Hollaar
Professor, School of Computing
University of Utah

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<http://digital-law-online.info/papers/lah/tech-protect.htm>
Comments or suggestions on this proposal should be sent to
hollaar@cs.utah.edu)

Introduction

In the past few years, several proposals on how to rectify the perceived problems with the United States patent system have been made. Those receiving the most attention are the United States Patent and Trademark Office (USPTO)'s own *21st Century Strategic Plan*,¹ the Federal Trade Commission (FTC)'s *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy*,² and the National Research Council (NRC)'s *A Patent System for the 21st Century*.³

Many of the recommendations of these three reports are similar. The proposals all recognize that examinations are not perfect. It is simply impractical to compare the claimed invention against every printed publication in every language, everywhere in the world and everything known, used, or on sale in the United States.⁴ So they suggest some form of post-grant patent opposition to allow others to submit prior art or otherwise indicate why a patent was improperly issued. Post-grant opposition and ending the diversion of patent fees (another recommendation common to all three proposals) would surely help

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¹ The United States Patent and Trademark Office submitted its *The 21st Century Strategic Plan* to Congress on June 3, 2002. Based on feedback from Congress and other stakeholders, the USPTO released an updated version on February 3, 2003.

<http://www.uspto.gov/web/offices/com/strat21/index.htm>.

² The Federal Trade Commission issued its report in October 2003, after 24 days of hearings from February through November 2002 involving more than 300 participants.

<http://www.ftc.gov/os/2003/10/innovationrpt.pdf>.

³ A prepublication draft of the report was released in April 2004 by the Committee on Intellectual Property Rights in the Knowledge-Based Economy established by the National Research Council's Board on Science, Technology, and Economic Policy

<http://books.nap.edu/catalog/10976.html>.

⁴ 35 U.S.C. §102(a) and (b).

the patent system, as will many of the changes proposed in the patent reform legislation currently before Congress.⁵

But I believe bolder changes may be necessary for a patent system to work in the face of today's fast-moving technologies. It should be clear that a system with a backlog approaching a million applications cannot provide needed protection for fast-moving technologies. In this paper, I propose the creation of a new form of technology protection as an alternative to many patents, and much stronger examination before the issuance of a conventional utility patent.

While the new protection would be beneficial for most fast-moving technologies, it is particularly applicable to the software-based and business method inventions that have been difficult to examine and contribute to much of the current backlog at the USPTO.

A patent or nothing

For many technologies, and in particular for computer-based inventions and methods of doing business,⁶ a patent may be the only available means of effective protection. Copyright only protects the expression of a technique, and not the technique itself. If a competitor can determine the method of a computer-based invention and implements it without reproducing its copyrighted expression (such as producing a "clean-room" implementation based on a functional description), there is no copyright infringement. Often, a technique is self-revealing, so that once competitors are aware of it, it is not difficult for them to incorporate it into their products or services.

An example of the problems

Amazon.com first used its "one-click" technique⁷ in September 1997.⁸ By May 1998, eight months later, Barnesandnoble.com (BN) was using the technique on its web site, although there is no evidence they were infringing Amazon's copyright in the implementation of the technique. One of BN's expert witnesses, who had previously implemented a web ordering system, admitted he never considered making single-action ordering an option, but once it was in use and publicly visible, it was not difficult for competitors to come up with their own implementations.

Amazon had filed a patent application on September 12, 1997, and the patent issued on September 28, 1999. BN was using the technique during the Christmas 1998 season, an important time for online merchandizing. After the patent was granted, Amazon was able to get an injunction against BN's use of the technique during the 1999 Christmas season.⁹

⁵ See S. 1145 and H.R. 1908, 110th Congress.

⁶ Many "method of doing business" patents are often just patents on computer-based inventions, since to be practical a computer must be used to process the amount of data necessary for a commercial system.

⁷ "Method and system for placing a purchase order via a communications network," United States Patent No. 5,960,411, issued September 28, 1999.

⁸ See *Amazon.com v. Barnesandnoble.com*, 73 F.Supp.2d 1228, 53 USPQ2d 1115 (WD WA 1999).

⁹ The injunction was later vacated by the Federal Circuit because there were substantial questions regarding the patent's validity. 239 F.3d 1343, 57 USPQ2d 1747 (Fed. Cir. 2001).

That pendency was average for a patent at that time, and low for most computer-related patents. Patent pendency now average over two years, and much longer for some technologies, and pendencies continue to increase.¹⁰ The original goal of the USPTO plan was to reduce average pendency to eighteen months, but for fast-moving technology, that is still too long.

All three reports recommended improvement in the quality of examination, especially with regard to the determination of whether a claimed invention is obvious in light of the prior art. It is hard to see how that would not increase pendency. Because patents may offer the only meaningful protection for a technology, an applicant will likely contest any finding of nonobviousness made by the examiner.¹¹

With the Supreme Court's unanimous decision in *KSR v. Teleflex*,¹² making it easier to show that a claim is obvious in light of the prior art, it will become more difficult to get a patent – in some cases, because the invention doesn't warrant it, but in other cases because the examiner has rejected the claims in a hindsight reconstruction – or take more time to get one.

Patent protection: too much, too long, too late

Whatever you may think about Amazon's "one-click" patent, it (and the hypothetical based on it) illustrate problems with the current patent system that the proposals would not fix, and may even worsen.

- It takes too long to get patent protection, particularly for fast-moving technologies that can be readily copied once they are being used.
- Patent protection often goes beyond what is needed to prevent competitors from usurping new techniques, with protection lasting about two decades and blocking those who independently created the technology.¹³
- Because of the requirement for nonobviousness, it should be difficult to get a patent, but the limited examination dictated by current application fees often doesn't give the examiner time to find and consider important prior art.

¹⁰ Statement of James E. Rogan, Under Secretary of Commerce for Intellectual Property and Director of the USPTO before the Subcommittee on Courts, the Internet and Intellectual Property, House Committee on the Judiciary, April 3, 2003.

¹¹ The statute places the initial burden of showing nonobviousness on the examiner. ("A person shall be entitled to a patent unless ..." 17 U.S.C. §102.)

Many times, an examiner simply finds a number of prior art references that seem to disclose the key aspects of the invention and asserts that the invention is obvious in light of those references. Such hindsight is clearly improper, with the Federal Circuit saying that there must be some motivation to combine the references. See, for example, *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). Once the applicant states that the prior art references don't teach the same thing as the claimed invention or there is no motivation to combine them, the examiner often withdraws the rejections but does not look for more pertinent prior art or reasons to combine the references, and instead allows the application. Presumably, that is one of the things that those advocating better examinations would change in some way.

¹² <http://www.supremecourtus.gov/opinions/06pdf/04-1350.pdf>.

¹³ Independent creation is not a defense to patent infringement. There is a prior user defense for business methods, but requires that the business method had been used at least a year before the filing date of the patent application. See 35 U.S.C. §273.

- No other form of intellectual property protection (copyright, trade secret) is available to protect a new computer technique or method of doing business.

Isn't copyright sufficient?

Most software developers seem to think that copyright protection is sufficient, perhaps augmented by licenses that require specific behavior in trade for being able to use, modify, or redistribute the software.¹⁴ But copyright only protects the expression of a technique, and not the technique itself. If a competitor can determine the method of a computer-based invention and implements it without reproducing its copyrighted expression (such as producing a “clean-room” implementation based on a functional description), there is no copyright infringement. Often, a technique is self-revealing, so that once competitors are aware of it, it is not difficult for them to incorporate it into their products or services.

This is a special problem when the source code is publicly available, since it would be easy for a company that didn't want to comply with the license that accompanies the source code to study it to learn how it does things and then describe that to a programmer who has not seen the source code to include it as part of its proprietary program. For example, if a new technique in an open source program substantially improved the performance of a relational database system, there would be little to keep companies that develop proprietary relational database systems from using it, even if they did not make their own source code available.

This one-way transfer of new techniques from open-source developers to proprietary software companies will only grow more acute as open-source programmers go from reimplementers trying to “free” proprietary programs to innovators creating new and unobvious (and therefore patentable) technology, but decline to file for patent protection.

A lesson from the past

It might seem appealing to extend copyright to protect in such instances. But experience shows that that will cause more problems than it solves. Before it became clear through a series of court decisions that software-based inventions were patentable, we had gone well beyond literal copying as infringement to protecting the “non-literal” aspects of the program.

The high-water mark in non-literal copyright protection for computer software came in *Whelan v. Jaslow*,¹⁵ which held that the “structure, sequence, and organization” of a computer program was protected by its copyright. In essence, the court addressed the boundary of what was copyrightable expression and what was an uncopyrightable idea by finding that the overall purpose of the program (in this case, running a dental lab) was the idea and

¹⁴ But if a license goes too far beyond statutory copyright, it may be viewed as misuse and the copyright becomes unenforceable in court. The leading case in this regard is *Lasercomb America v. Reynolds*, 911 F.2d 970, 15 USPQ2d 1846 (4th Cir. 1990), which I discuss at <http://digital-law-online.info/lpdi1.0/treatise15.html#secII.K>.

¹⁵ 797 F.2d 1222, 230 USPQ 481 (3d Cir. 1986).

anything used to implement that idea was protected expression. That included file structures, screen displays, and the functionality of similar subroutines.

We don't know how far courts would have continued to stretch copyright beyond literal infringement because about the time *Whelan* was decided, the Supreme Court had found an algorithm-based invention that it felt was patentable¹⁶ and the Federal Circuit had completed its embrace of software patents with *In re Alappat*.¹⁷ As software patents became the preferred means for protecting a new technique, copyright reverted to protecting against the literal copying of a computer program.

But even if copyright could be used to protect software techniques, there will be two problems. The first is the term of protection. Many people think the twenty-years-from-filing term for patents is far too long for computer software. Patents for Microsoft's Windows 95 are now just expiring. But copyright lasts seventy years beyond the death of the last author or, in the case of a published work made for hire, 95 years. The copyright on Windows 95 will not expire until the end of 2090!

Disclosure and claiming is important

The second problem is the lack of a disclosure requirement in current copyright law. The disclosure requirement forms an important part of the patent system, although it is used by far too few software developers.¹⁸ Even with "open source" software, it is difficult to find how a particular function is performed unless that function is an obvious part of a known program.

In fact, since adoption of the Copyright Act of 1976, there is no longer a requirement that the protected work even be published. A trade secret, written down or otherwise fixed in a tangible medium of expression, is protected to the same extent as a book on sale,¹⁹ even though its protected expression is unavailable except through a trade secret agreement. This is the case for most proprietary computer software.

In contrast, a patent concentrates on one particular technique, and that technique must be described fully in the published patent, so that a skilled person can implement and use the technique without undue experimentation. The disclosure is also manually placed within a classification system so that it can be readily located.²⁰

¹⁶ *Diamond v. Diehr*, 450 U.S. 175 (1981). But software patents had issued well before then. For example, see U.S. Patent 3,568,156, "Text Matching Algorithm," granted in 1971. (The inventor, Kenneth Thompson, is also one of the creators of the Unix operating system.)

¹⁷ 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir. 1994).

¹⁸ There is a myth that if one is aware of a patent and infringes it, the damages will be tripled. 35 U.S.C. § 284 really provides for increasing the damages by "up to three times" (emphasis added) in any case, with no special provision for willful infringement as in United States copyright law, although it is more likely that the judge will increase the damages when the infringement is willful.

¹⁹ Perhaps even more, since the term of a work made for hire is 95 years from its first publication, or 120 years from the date of its creation, whichever ever comes first. 17 U.S.C. § 302(c).

²⁰ When there are too many patents within a particular class and subclass, the patent office breaks the subclass (and related subclasses) into more specific subclasses or sometimes a new classification. For example, software-based inventions were initially a

A copyright comes into being at the time of fixation of a work, and a simple registration form must be filed before an infringement suit can be brought. But such simplicity comes at a price – as cases like *Whelan* show, it is hard to determine just what is protected by a copyright, making it difficult for a person wanting to produce a new implementation of a computer program. Because of the claiming requirement for patents, it is far easier to know in advance what a patent covers than what a copyright covers, especially if copyrights were to expand again to cover more and more non-literal aspects of a computer program because patent protection is not longer available.

Better examination for regular patents

One problem not discussed by the advocates of better examination for regular patents is the effect on fees. A better examination will necessitate an increase in fees, perhaps a substantial one, to pay for the increased time spent by the examiner reviewing prior art and addressing the arguments of the applicant, as well as a “second pair of eyes” review as is now the case for business method patents,²¹ if that idea were extended to other arts. But even though patent application fees are a small part of the cost of filing for a patent,²² any substantial increase will likely lead to a reduction in patent filings, especially by cash-strapped small companies and inventors.

We saw the effect of discouraging the filing of applications when the USPTO’s policy was not to grant patents on software-based inventions, or at least make it difficult for applicants to get such a patent. Software developers didn’t file applications on their advances because they didn’t believe that patent protection was available, resulting in a gap in the USPTO’s prior art collection corresponding to the formative years of software systems.²³ We are still paying for that gap in the prior art collection in terms of patents being issued on old techniques, and we cannot afford to have that happen again.

By providing an alternative to patent protection, it would be possible to provide the examination a utility patent deserves without leaving things unprotected or reducing disclosures of the prior art. Instead of a single examiner spending about twenty hours on an application, an increase in

subclass within the class for computers. They later became their own class. Now, they span a number of classes, with an entire class for database techniques and another for artificial intelligence.

²¹ See <http://www.uspto.gov/web/offices/com/sol/actionplan.html>.

²² The current application fee is \$770, and is half that for “small entities.” (That obviously doesn’t pay for a lot of examiner time.) If the patent is allowed, there is a \$1330 issue fee, also discounted by fifty percent for small entities. In contrast, patent attorneys may charge \$5000 or (often) more to prepare a patent application.

²³ A personal example: In 1969, working for the Chicago software company Datalogics, I developed a new way for composing complex, multicolumn page (such as the yellow pages) and producing an output for a phototypesetter that only required forward motion of the film. The technique was at least ten times faster than other systems, and allowed Datalogics to become a leader in computer typesetting systems. (At one time, about two thirds of law reviews, for example, were composed using Datalogics software.)

The technique remained a trade secret of Datalogics, since copyright would not protect the technique itself and patents seemed unavailable. As far as I know, a description of the technique has never been available to the public and so the technique has been essentially lost.

application fees by a factor of twenty²⁴ could pay for a team of examiners, led by a senior examiner, spending on the order of 400 hours searching prior art and assessing the obviousness of an invention.

Such a fee increase could also reduce the workload on the patent office since many inventors might opt for the lower-cost, and immediate, alternative protection and not go for a full patent.

But of more importance, because there is an alternative form of protection available, the requirement for granting a full-fledged utility patent, with its long term and winner-take-all approach, can go from “A person shall be entitled to a patent *unless*”²⁵ to “A person shall be entitled to a patent *if*.”²⁶

Intermediate forms of protection

Eliminating software patents and going to copyright as the only protection is likely to cause new distortions in copyright. Similarly, the solution to the problems with patents will not be found by fine-tuning the current patent statutes and rules. It is better to look at those aspects of copyright protection, such as the defense of independent creation, and combine them with the best parts of patents. Such protection could be used in lieu of a patent, or until a patent is granted.

²⁴ From \$770 to about \$15,000, with a suitable reduction for small entities.

²⁵ 35 U.S.C. § 102 (emphasis added).

²⁶ For applications with more than five independent claims, or 25 total claims, new USPTO rules essentially make this change. Those applications must include an “examination support document” that includes not only the results of a mandatory search by the applicant, but also a discussion of the search results in light of the claimed invention and “A detailed explanation particularly pointing out how each of the independent claims is patentable over the cited references.” 37 CFR 1.265(a)(4). In guidelines, the USPTO has stated:

- The ESD must set out with particularity, by reference to one or more specific claim limitations, why the claimed subject matter is not described in the references, taken as a whole. The applicant must explain why a person of ordinary skill in the art would not have combined the features disclosed in one reference with the features disclosed in another reference to arrive at the claimed subject matter. The applicant must also explain why the claim limitations of the independent claims render the claimed subject matter novel and non-obvious over the cited prior art.

- General statements that the independent claims are neither anticipated nor rendered obvious by the cited references or that the references are not properly combinable will not be acceptable. A general statement that all of the claim limitations of the independent claims are not described in a single reference does not satisfy the requirements of 37 CFR 1.265(a)(4).

<http://www.uspto.gov/web/offices/pac/dapp/opla/presentation/esdguidelines090607.pdf>

This might become the norm for all patent applications if language in the current House patent reform bill, H.R. 1908, become law. It would allow the Director of the USPTO, by regulation, to “that applicants submit a search report and other information and analysis relevant to patentability.” H.R. 1908, as passed by the House, adding a new 35 U.S.C. 123. The only exception would be for a “micro entity” who has not filed five or more previous patent applications.

The United States took a small step in that direction with the passage of legislation protecting “useful articles,” although the only article that Congress seems to feel is useful is a “vessel hull.”²⁷ Others have proposed special protections for “useful articles,”²⁸ but those laws or proposals are generally limited to protecting mechanical devices and other manufactured items. They do little or nothing to protect software-based inventions, methods of doing business, or other processes, which as discussed above are areas where an intermediate form of protection may be the most useful.

A number of countries have a “petty patent” or “utility model” of intermediate protection.²⁹ Unlike a regular patent, the intermediate forms of protection generally have no substantive examination before issue, a shorter term of protection, and a lower threshold of “inventiveness.” While Germany does not allow the protection of processes and methods under its utility model, it may be possible to protect computer programs and even business methods with clever claiming, such as claiming apparatus, articles of manufacture, or signals as is now common in the United States for software-based inventions.

The United States is starting to discuss similar ideas. The *United States Patent and Trademark Office 2007–2012 Strategic Plan* states:

A longer-term endeavor, critical to addressing quality and timeliness, is working with our stakeholders, the Administration, Congress, and our international partners to determine if there is some combination of examination alternatives that will better meet applicants’ needs while providing a more efficient use of USPTO examination resources.

But there is a problem with the utility model. Even though there has not been a substantive examination of the application, others may not make or sell the protected item. Even if prior art is known that would invalidate the filed claims when examination is requested, that may only result in narrowed claims that avoid the prior art but still cover what one is doing. Until examination has been completed, utility model protection can cause substantial uncertainty for somebody developing a similar product.

With the Supreme Court’s unanimous decision in *KSR v. Teleflex*,³⁰ making it easier to show that a claim is obvious in light of the prior art, it will become more difficult to get a patent – in some cases, because the invention doesn’t warrant it, but in other cases because the examiner has rejected the claims in a hindsight reconstruction – or take more time to get one. This will make an alternative form of protection more attractive in the United States.

How a new protection could work

Of course, for any new form of protection, the devil is in the details. Instead of including the details here, I will give an overview of what I am proposing as an alternative to a patent for protecting fast-moving technologies.

²⁷ See 17 U.S.C. § 1301(b)(2).

²⁸ One group that has been advocating article protection for decades is IEEE-USA. <http://www.ieeeusa.org/forum/POSITIONS/newip.html>.

²⁹ These include Japan, China, Taiwan, and most European countries with the exception of the United Kingdom, Sweden, and Luxembourg. In May 2001, Australia introduced a new, limited patent, which it calls an “innovation patent.”

³⁰ <http://www.supremecourtus.gov/opinions/06pdf/04-1350.pdf>.

You can find the currently-proposed annotated statutory language, along with annotations discussing each provision at:

<http://digital-law-online.info/papers/lah/tech-protect-statute.pdf>

Rather than creating a new property right, as a utility patent does, my proposal instead would provide added federal protection to something that is already in existence. In that respect, it is like federal trademark protection or copyright, especially federal copyright before the Copyright Act of 1976 where registration, notice, and publication were required for a work to be protected.

How the protection comes into being

To protect a technology, the first step would be to file an application for registration. This application would take the same form as an application for a utility patent, including claims. It would be possible to use convert the registration application to an application for a utility patent at a later time, benefiting from the earlier registration.

The registration application would only be examined to see that it is in the proper form. No examination for adequacy of disclosure, utility, novelty, or nonobviousness would be performed. But if the application was later found not to provide an adequate disclosure of the technology, protection under the statute would be lost and it would not provide a priority date for a utility patent application. This should encourage full disclosure on the part of a registrant.

The application fee would be on the order of \$500, which would cover not only the examination as to form, but also the manual classification of the technology to be protected so that it can be added to the USPTO's prior art database as if it were an issued patent or published application. A portion of the fee would also cover the reclassification of an existing class or subclass when too many patents fall under it. While this is a normal activity of the USPTO, the number of applications for this low-cost protection will likely make it a more frequent activity.

The USPTO would provide a registration number and make the registration information available online. When a registrant produces a product that embodies the technology, it would mark the product with the registration number in a way specified by a regulation that would address the variety of product types. Special ways of handling a product that encompasses a number of protected technologies would be developed, such as using a product reference number that would provide a list of all the protected technologies in the product.

Using the protected technology by the registrant without proper marking would result in a loss of protection. That way, any person seeing a product would know whether it contains a protected technology and, by referencing the registration number on the USPTO web site, what aspects of the product are protected and for how long.

This addresses two problems. First, it limits "patent trolls" by requiring that there be a product actually being delivered in commerce for there to be protection. Second, it is simple to determine whether something in a product is protected without having to do a patent search.

What it protects

Protection would start the first time a product is distributed in commerce or a process is used to provide products or services to others, and would last up to four years. During that time, nobody would be permitted to distribute a product or provide a service that stems from the protected technology. But the protection would not cover personal use of a technology.

There is a reason why software developers are less concerned about copyrights than patents. To infringe a copyright, you have to have based your work on the copyrighted work. No matter how similar your work is to another, if you can show that you independently created your work, you are not an infringer.

There is no such safe harbor for a patent infringer. If what you are doing meets all the elements of any claim of a patent, you are an infringer. It makes no difference whether you have ever seen the patented thing or are aware of the patent. As some recent high-profile cases have shown, a software developer can plow millions into development of a new system, but can be stopped by the owner of a patent that is not even producing a product or licensing the technology to a manufacturer.

This scares most software developers, especially when the quality of some patents is considered. But protection for independent creators, even when they have not fully completed their own work, should address that concern. Because infringement requires derivation from the protected article in commerce, if one is not trying to clone or develop a program similar to an existing one, there is no need to worry about infringement. And if they are, they can determine from the registration information what they can and cannot do, and when the protection ends.

Some examples

To see how this new protection would work, consider the case of software developer A who has registered a technology and has included it as part of a properly-marked product. Developer B sees A's product and decides to produce a similar product. (This might, for example, be a new implementation of a proprietary software product to make it open source.) By referencing the registration information from the registration number on the product, B knows what is protected. If the competitive product can't be produced without using the protected technology, then B would have to wait until the term of protection ends, in four years or less.

The short period of time that A is protected against having its product "knocked off" provides a head start over competitors. But that protection is for a very limited time. A can only protect its next-generation products by including new features that would receive their own protection.

Now consider developer P who has created a product about the same time as A, using similar technology as A registered. If A had a utility patent on the technology, P would be forced to abandon its product, take a license if A offered one, or try to invalidate A's patent, all of which could result in a large loss to P. But P does not need to worry about A's protected technology if it has kept good records of its product development and can show that its product did not stem from A's.

Finally, consider hobbyist H who sees A's product and decides to write a similar program for his personal use. Because he is not distributing the program or providing a service using A's protected technology, he would be liable. This is in contrast to a utility patent, where making or using a patented product is an infringement, with only a narrow exception for "experimental use."³¹

During the limited term of protection, A can determine whether it makes sense to seek longer and broader protection (including against independent development) by getting a utility patent. Even if the examination is more stringent, it will be easier to show nonobviousness through secondary considerations such as commercial success and lack of independent creation by others.³²

But even then, other developers who have independently developed the same technology would have fewer worries. First, they would know from A's claims in the registration application how broad any patent that A might get would be, and may be able to "invent around" A's possible patent before it even issues. Second, a prior user right could protect them if they have independently come up with the patented technology.

Conclusion

While a number of reports have made suggestions for improving the United States patent system, improving the quality of examination may have unexpected consequences. The increased examination fees may discourage the filing of patent applications, thereby hurting the prior art collection needed to properly examine applications. Heightened scrutiny for nonobviousness will likely increase pendency, particularly for inventions where patents are the only available form of protection and so the applicant must continue prosecuting an application until a patent is granted.

For fast-moving technologies, current patent protection is too much, too long, and too late. The creation of an alternative form of protection could provide the necessary protection while allowing substantial improvements to the quality of the examination of regular patents.

And it would provide software developers, especially those creating open-source software, with a way of protecting their new technology from commercial exploitation by others who don't simply copy it. The protection would be simple to get, inexpensive, and place the applicants' description of the techniques in a repository that would be readily accessible to those wanting to learn and build on the technology – the database of patents and applications maintained online by the patent offices. And that organized prior art would be available to examiners, so that somebody else couldn't get a patent on something unoriginal and force the software developer into expensive litigation to invalidate the patent.

³¹ See *Roche Products. v. Bolar Pharmaceutical*, 733 F.2d 858 (Fed. Cir. 1984), finding that experimental use must be "for amusement, to satisfy idle curiosity or for strictly philosophical inquiry."

³² See *Graham v. John Deere*, 383 U.S. 1 (1966).