

# A Patent Primer for the Communications Lawyer

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Imagine, if you will, that you have just successfully launched your new website or added new exciting features to your existing website. Your static media has become interactive with streaming media, e-commerce, click-throughs, visitor tracking capabilities, and other new cutting-edge technology. And then—zap, bam, boom, pow! Next thing you know, you are defending against a charge of willful patent infringement brought by a company deep in the heart of Texas that you never heard of and can't find anything about, and you don't even have an office in the Lone Star State. What happened and why?

What happened is that you (and you are not alone) were not aware that many aspects of the Internet, such as advertising, marketing techniques, and sales procedures, may be protected by patents. Neither your software vendor nor your website designer warned you about the problems. You are left alone to defend your rights in a foreign jurisdiction at huge expense with maximum exposure.

Examples of these types of Internet-related patents are listed in the table on page 22.

To understand how such patents can impact your new website or your addition of new features to your existing website, it is helpful to understand the basics of patent law (basis of U.S. patent law, parameters of patent's protection, and the patent document); how patents compare to other forms of intellectual property (such as trade secrets, copyrights, and trademarks); the criteria for obtaining a patent (e.g., patentable subject matter, conditions and requirements for patentability, technical disclosure requirements, one-year filing deadline, and prosecution); the rise of Internet-

associated patents (typically called business method patents); the changing patent law landscape (e.g., recent Supreme Court decisions and proposed legislative reforms); and the risks of patent infringement.

## Basis of U.S. Patent Law

To understand patents and their growing importance in the communications industry, it is necessary to place them in their proper context. An understanding of the basis of U.S. patent law will be helpful in this regard. The U.S. Constitution, which declares that "Congress shall have the power . . . to promote the progress of science and useful arts, by securing for limited times to . . . inventors the exclusive right to their . . . discoveries," provides the basis for our patent system.<sup>1</sup> Current patent law, based upon the Patent Act of 1952, is found at 35 U.S.C. § 101 et seq.

## Parameters of Patent's Protection

Patents, although they are the most difficult property rights to obtain, are considered by some to be the most valuable class of intellectual property. Patents confer what is essentially a government-granted monopoly for a specified term of years that precludes others from exploiting even independently conceived inventions as long as they constitute or are equivalent to an invention described in one or more of the patent's claims. Theoretically, the grant of patent rights is a quid pro quo for the inventor's disclosure of a detailed description of how to make and use an invention so that after the expiration of the term of the patent, others may make, use, or sell the invention.<sup>2</sup> The grant of patent rights serves as an incentive for investing time and resources in creating and developing inventions.<sup>3</sup> Patents do not grant the patent holder the right to make, use, or sell the invention. Rather, they provide protection against would-be competitors by enabling the patentee to stop others from making, using, importing, selling, or offering to sell the patented inven-

tion (or an equitable equivalent) in the United States without permission.<sup>4</sup> In other words, a patent provides no positive rights, only the power to block others from using the invention.

## Patent Document

The actual patent document consists of several defined sections.<sup>5</sup> The specification provides a brief technical summary of the invention (the "abstract"), which should be understandable to anyone reading the patent, and describes:

1. the technical subject matter to which the invention relates, the specific related problems known in the field to which the invention is directed, and problems that the patentee's invention solves (the "background of the invention");
2. the specific invention as claimed by the patentee, setting out the exact nature, operation, and purpose of the invention (the "summary of the invention");
3. drawings when necessary to assist in understanding the invention and a brief description of the drawings' contents ("brief description of the drawings"); and
4. a clear and concise explanation of the invention such that a person "of ordinary skill in the art" is capable of practicing the invention without undue experimentation (the "detailed description of the invention").<sup>6</sup>

Because they define the invention, the claims are the most important part of the patent. The Federal Circuit, which acquired exclusive appeals jurisdiction over all patent cases in 1982, has characterized the claims in a patent as providing the "metes and bounds of the right which the patent confers on the patentee to exclude others from making, using, or selling the protected invention."<sup>7</sup> Put another way, the claims are like the deed to a piece of real estate, precisely defining the boundaries of the scope of the invention. Patents typically include a number of claims, which may be

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directed to different aspects or variations of the invention and which vary from very general and broad to very specific, narrow descriptions of the invention.

There are two primary types of patents in the United States: utility patents and design patents. Utility patents are granted for a period of twenty years from the date that the patent application is filed<sup>8</sup> and cover the functional or useful aspects of an invention.<sup>9</sup> Although granted mostly for new products or processes, patents can also be obtained for compositions of matter (e.g., drug compounds), business methods, or any improvement or new use of patentable subject matter.

Design patents cover “any new, original, and ornamental design for an article of manufacture,”<sup>10</sup> i.e., the aesthetic features of an invention. Because design patents do not cover the functional or useful features of the article, they only provide the owner with the right to exclude others from making, using, or selling the same product with the same aesthetic design. For example, Apple can use its design patent to exclude competitors from copying the design and appearance of the semitransparent case of its iMac computer,<sup>11</sup> but not its functionality (although that functionality is likely covered by other forms of intellectual property). Design patents are granted for a term of fourteen years from the date of issuance.<sup>12</sup>

### Patents Versus Other Forms of IP

While patents generally seek to protect new and useful inventions, trade secrets, copyrights, and trademarks protect other aspects of intellectual property.

### Trade Secrets

The subject matter that can be protected as a trade secret is generally broader than that protected by a patent because trade secrets include any technical or commercial information, such as formulas, patterns, physical devices, ideas, processes, compilations of information (e.g., customer lists or business and marketing plans), or other information that is used as part of a company’s business, is maintained as a business secret, and affords an advantage over competitors that do not know about or use it.<sup>13</sup> Trade secret protection can last indefinitely as long as the secrecy of the technical or commercial information is maintained.<sup>14</sup> One of the most familiar examples of a trade secret formula is the Coca-Cola, which the Coca-Cola Company has gone to great lengths to protect, including ensuring that the formula is kept locked in a bank vault that can only be opened by resolution of the company’s board of directors and making sure that no one individual knows every step in the formula.

Although trade secrets are an important form of intellectual property, they are the least protectable. First, although trade secrets in theory can be protected indefinitely against improper taking (e.g., by theft, fraud, breach of contract, or illegal surveillance), such protection is available only as long as the secrets are not disclosed to the public through, for example, the sale of products that can be reverse engineered.<sup>15</sup> Second, a company cannot preclude competitors from using trade secrets that have been independently discovered or developed (e.g., by developing a formula that tastes like Coca-Cola).<sup>16</sup> Finally, it is difficult to prove that trade secrets have been improperly acquired.

Unlike the situation with patents,

copyrights, and trademarks, there are no federal civil laws governing trade secrets.<sup>17</sup> But every state has common law or a statute, frequently modeled on the Uniform Trade Secrets Act, prohibiting the theft or disclosure of trade secrets, and allowing a trade secret owner to obtain an injunction against further disclosure or use of the secrets and to collect damages for any economic injury suffered as a result of the improper acquisition and use of the trade secret.<sup>18</sup>

Patents and trade secrets each have advantages and disadvantages with regard to protecting a business’s innovative technology. Obtaining a patent for an invention gives the patentee the right to absolutely exclude anyone from making, selling, or using the invention for a specified period of time (regardless if it is independently developed), at the end of which anyone can practice the invention.<sup>19</sup> Although an invention can be maintained as a trade secret indefinitely as long as it is not publicly disclosed, the invention’s owner must take steps to maintain its secrecy; and it can be used at any time by anyone who independently develops the same invention.<sup>20</sup>

### Copyrights

Copyright law protects original literary, artistic, or other creative works; and such protection usually lasts during the author’s life plus seventy years (or some 95 to 120 years for works made for hire).<sup>21</sup> Copyrights protect works of authorship ranging from traditional expressive works, such as books, music, and films, to such commercial and functional works as computer programs, instruction manuals, product catalogs, and product labels. Unlike patents, copyrights do not protect ideas, processes, or procedures—only their particular expression.<sup>22</sup> For example, a patent could protect a process for streaming video over the Internet, while a copyright could only protect a particular software implementation of the process. There is, however, some overlap between copyright and design patents to the extent that an article of manufacture embodies a copyrightable design distinct from the article itself. For example, the carved ornamental woodwork of a bed—including leaf-and-flower motifs, foliate scrolls, a serpentine decoration, and a seashell motif—may be protected by copyrights, while the frame of the bed is

Patent No.	Date of Grant	Description of Patent
5,794,210	08/11/98	Method for rewarding customers who receive online advertisements (the Attention Brokerage patent)
5,960,411	09/28/99	“1-Click” method for expediting online orders, which allows repeat customers to bypass address and credit card data entry
6,073,241	06/06/00	Operation of banner advertisements
6,157,946	12/05/00	Use of pop-up advertising windows

protected by a design patent.<sup>23</sup>

A copyright arises when an original work is fixed in a tangible medium of expression, such as when it is written, recorded, photographed, or compiled on a disk or chip.<sup>24</sup> Although a copyright owner may prevent others from copying, distributing, publicly performing or displaying, or making a derivative work of the original work, copyright protection has significant limitations. Unlike patents, copyrights do not protect against independent creation and can be circumvented by reverse engineering.<sup>25</sup> For example, copyrights in software can be circumvented using “clean room” techniques; i.e., a “dirty team” decompiles the software to derive a description of its operations, and a separate clean team is given access to this description, but not the software, and then prepares an independent code based on this functional description.

### **Trademarks**

Trademark law protects indications of the commercial source of products or services and such marks do not expire (if the appropriate steps are taken to maintain rights).<sup>26</sup> A trademark is a word, phrase, symbol, design, or device—such as an alphanumeric combination (e.g., 7-Eleven for convenience stores), color (e.g., pink for Owens-Corning’s fiberglass insulation); sound (e.g., the distinctive roar of a Harley-Davidson motorcycle); or smell—used to identify and distinguish one company’s products from another’s. A trademark identifying a service rather than a product is called a service mark.<sup>27</sup> Creating and maintaining trademarks requires special attention because they establish goodwill for a company’s goods and services as the public learns to associate the marks with a single source and quality; and they cannot be bought, sold, or licensed without consideration of the underlying business.

Unlike patents, the benefits of which can only be obtained when a patent is applied for and ultimately issued by the U.S. Patent and Trademark Office (USPTO), trademark rights can be obtained by use or registration.<sup>28</sup> A business that creates a name, logo, or even a color and uses it on its goods or packaging obtains rights in that trademark and can enforce its rights, provided that consumers are not confused as a result of its use. Creation of trademark rights by registration, on the other hand, requires that a business register its trademark with

the appropriate government office, e.g., the USPTO. The owner of a registered trademark may bring suit for trademark infringement to prevent unauthorized use of the trademark or any other related mark that creates a likelihood of confusion between the two marks. Because registration of a trademark is not required to sue for infringement, the owner of a common law trademark may also commence legal proceedings; however, an unregistered mark may only be protectable within the geographical area of its use or in geographical areas of reasonable future expansion.<sup>29</sup>

Trademark rights, unlike patent rights, must be protected through actual lawful use of the trademark. These rights will cease if the mark is not actively used for a period of time, i.e., three to five years in most jurisdictions.<sup>30</sup> After a trademark is registered, failure either to actively use the mark in the lawful course of trade or to enforce its registration in the case of infringement may lead to a cancellation proceeding being filed against the registration to force removal of the trademark from the register on the grounds of “non-use.”<sup>31</sup> Thus, a company may obtain patent protection for its invention only for a specific number of years but can protect its name as a trademark indefinitely.

### **Criteria for Obtaining a Patent**

Patents do not arise automatically; inventors must file an application for a patent with the USPTO affirmatively claiming the invention. The application must follow a specific format (as discussed below) and the claims must be carefully crafted to ensure that the full scope of the invention is properly claimed. The inventor must also file an oath or declaration, pay a filing fee, and submit any prior art references of which the inventor is aware to the USPTO to be considered in examining the patent application. It is strongly advisable to consult a patent attorney about preparing a patent application and, in particular, about the proper drafting of the claims.

There are various statutory requirements for obtaining a patent, including (i) patentable subject matter; (ii) patentability requirements, such as utility, novelty, and nonobviousness; and (iii) technical disclosure requirements.

### **Patentable Subject Matter**

The first criterion that a patent applicant

must meet is to show that the subject matter of the invention for which a patent is sought is patentable.<sup>32</sup> The patent statutes allow a patent applicant to obtain patent protection for any “new and useful process [such as a process of manufacture or a method of use], machine [such as a lawn mower, which has moving parts], manufacture [an article without moving parts, such as a hammer], or composition of matter, or any new and useful improvement thereof. . . .”<sup>33</sup> The U.S. Supreme Court has interpreted this broad language to “include anything under the sun that is made by man.”<sup>34</sup> Patent protection is not available for things not made by man, such as the “laws of nature, physical phenomena, and abstract ideas” because “[s]uch discoveries are ‘manifestations of . . . nature, free to all men and reserved exclusively to none.’”<sup>35</sup> Thus, “Einstein could not patent his celebrated law that  $E=mc^2$ ; nor could Newton have patented the law of gravity.”<sup>36</sup> An idea or algorithm may be patentable, however, if it is embedded in a process. For example, an applicant could obtain a patent for a process for compressing digital music that is essentially using a computer to carry out a mathematical compression algorithm.

Courts have recently taken an interest in examining the boundaries of the patentable subject matter requirement. Although it appeared in 2005 that the Supreme Court was going to address the issue of patentable subject matter in *Laboratory Corp. of America Holdings v. Metabolite Laboratories, Inc.*, the Court dismissed the petition on procedural grounds.<sup>37</sup> The Federal Circuit has subsequently taken up this issue in three cases. In *In re Nuijten*, the court held that a signal not embodied in a tangible media or memory did not fall within § 101’s four classes of patentable subject matter.<sup>38</sup> In *In re Comiskey*, the court held that although claims directed to a method for mandatory arbitration resolution (i.e., a business method) that combined the use of machines with a mental process were patentable under § 101, two claims in which the claimed subject matter amounted to no more than a “mental process” were not.<sup>39</sup> The Federal Circuit recently decided to hear the appeal en banc in the third case, *Ex parte Bilski*, in which the Board of Patent Appeals & Interferences (BPAI) affirmed a patent examiner’s § 101

rejection of application claims directed to a method for hedging consumption risk for trading commodities.<sup>40</sup> The Federal Circuit requested that the parties file supplemental briefs addressing several specific patentability issues.<sup>41</sup>

### **Conditions and Requirements**

Whether a patent can be obtained for an invention that encompasses patentable subject matter depends on whether the invention meets the other “conditions and requirements” of the Patent Act,<sup>42</sup> i.e., the invention must be useful, new, and nonobvious.

### **Utility**

Because the Constitution requires that Congress promote the “useful arts and sciences,” § 101 also includes a utility requirement for non-design patents.<sup>43</sup> This requirement is usually easily satisfied because to be useful an invention must simply be capable of achieving at least one of its stated purposes.<sup>44</sup> The utility requirement has other limits, i.e., “[a]n invention need not be the best or the only way to accomplish a certain result, and it need only be useful to some extent and in certain applications.”<sup>45</sup>

Congress has also defined certain subject matter as lacking utility *per se*. Specifically, § 101 excludes any invention that is illegal, immoral, contrary to public policy, or directed to “devices deemed to be scientifically impossible, such as perpetual motion machines.”<sup>46</sup> For example, until 1977, gambling machines were held to lack utility,<sup>47</sup> and the exclusion still applies to methods of counterfeiting currency, which are only useful in committing a crime or fraud.<sup>48</sup>

### **Novelty**

Even when an invention encompasses proper subject matter and is useful, patent law still requires that the subject matter be novel. The novelty requirement is embodied in § 102 and prevents a patent applicant from obtaining a patent if the invention is found in identical form in any single prior art reference (i.e., the invention has been “anticipated”).<sup>49</sup> The term *prior art* consists of the body of common knowledge that is already known to people of ordinary skill in the relevant technology and includes written materials such as earlier patents, scholarly articles, product literature, and other kinds of printed publications, as well as nonwritten materials such as products in

the market.<sup>50</sup> This section also contains other statutory bars to patenting an invention, such as if it was commercially exploited (i.e., “on sale”) or “in public use” for more than one year before the date of application for a U.S. patent or if the inventor filed a foreign application for the same invention more than one year before filing the corresponding U.S. application.

### **Nonobviousness**

Even if an invention encompasses proper subject matter and is useful and novel, patent law also requires that an invention meet a nonobviousness requirement.<sup>51</sup> Section 103 states that

[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.<sup>52</sup>

Unlike the novelty inquiry under § 102, the nonobviousness inquiry does not focus on a single prior art reference; rather, it examines the totality of the prior art. More than forty years ago, the Supreme Court set forth the considerations for determining whether an invention was obvious in *Graham v. John Deere Co.*<sup>53</sup> Specifically, the nonobviousness inquiry requires consideration of the following factors: (1) the scope and content of relevant prior art, (2) the differences between the claimed invention and the relevant prior art, and (3) the level of ordinary skill in the relevant art.<sup>54</sup> Even if the invention appears obvious in light of the three *Graham* factors, secondary considerations—such as a long-felt but unsatisfied need for the claimed invention, failure of others who have tried to solve the problem solved by the invention, unexpected results of the claimed invention, and commercial success of the claimed invention—may compel a nonobviousness finding.<sup>55</sup>

### **Technical Disclosure Requirements**

The first paragraph of § 112, relating to the sufficiency of the patent disclosure, provides technical disclosure requirements:

The specification shall contain a [i] written description of the invention, and of the manner and process of

making and using it, [ii] in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and [iii] shall set forth the best mode contemplated by the inventor of carrying out his invention.<sup>56</sup>

Three separate patentability requirements are embodied in this paragraph: written description, enablement, and best mode.

The written description requirement ensures that a patent applicant claims only the invented subject matter that is disclosed in the patent application’s specification. This requirement has some flexibility, however, because “every nuance of the claims [need not be] explicitly described in the specification” as long as a person of ordinary skill in the art “would have understood the inventor to [have been] in possession of the claimed invention at the time” the patent application was filed.<sup>57</sup>

Satisfying the second patentability requirement, i.e., enablement, requires that the patent teach a person of ordinary skill in the art how to make and use “the claimed invention without undue experimentation.”<sup>58</sup> However, because a patent is directed to a person of ordinary skill in the art, the disclosure need not teach what is already known to the skilled artisan. Moreover, satisfaction of the enablement requirement does not mean that there can be no experimentation; some experimentation may be required to practice the invention as long as the level of experimentation is not “undue.”<sup>59</sup>

The last aspect of the mandates in the first paragraph of § 112 is the best mode requirement. This inquiry focuses on the inventor’s knowledge at the time the patent application is filed with the USPTO. Specifically, at the time of filing, inventors must disclose the best mode they know for making and using the claimed invention. Thus, inventors cannot disclose an inferior mode of practicing the invention to the public while concealing the best mode for their own personal use. The policy underlying this requirement is the quid pro quo relationship between the public and the inventor.<sup>60</sup>

### **One-Year Filing Deadline**

As discussed above, a patent gives an in-

ventor (or the inventor's assignee, which is usually the company employing the inventor) the right to prevent others from making, using, or selling the invention for a specified period of time. Consulting a patent attorney about preparing a patent application earlier rather than later is advisable in order to avoid one-year filing deadline pitfalls.

An inventor must file a patent application within one year of disclosing the invention in a printed publication, demonstrating the invention, or offering the invention for sale.<sup>61</sup> Failure to do so results in a forfeiture of patent rights. An inventor coming up on a one-year deadline may file a provisional application (with a lower filing fee and fewer formal requirements, e.g., no claims are required) as a one-year placeholder.<sup>62</sup> The inventor has one year within which to convert the provisional application into a full nonprovisional application, or the invention will be deemed abandoned.<sup>63</sup> Even if an employee or a third party (such as a vendor) to whom an invention has been disclosed has signed a nondisclosure agreement, a provisional or nonprovisional patent application should still be filed within one year of such disclosure as a prophylactic measure to avoid any statutory bars.

### Prosecution

After the patent application is filed, it is then reviewed by the USPTO—a process known as patent prosecution. During this process, a patent examiner reviews the claims and determines whether the claims should be accepted or rejected for failure to comply with one or more of the patentability requirements, and the patent applicant (or the applicant's attorney) is given an opportunity to try to overcome the examiner's rejections (e.g., by amending the claims).

Patent applicants must be careful during the prosecution process that argument about or amendments made to the claims do not cause the issued patent to be narrowly construed. A complete record of the correspondence between the patent office and the applicant or applicant's attorney (referred to as the "file history" or "file wrapper") during the prosecution process is maintained by the patent office; and what is said about the invention claimed during patent prosecution can, and frequently does, become an issue during patent litigation. Employing a skilled patent

attorney during prosecution of the patent application should allow the patent applicant to avoid these pitfalls.

At the end of the prosecution process, the USPTO will either allow the application and a patent will issue; or the application will finally be rejected, in which case the applicant will have several options that may be pursued (e.g., filing an appeal).

### Rise of Business Method Patents

Traditionally, communications and entertainment companies only had to worry about patents directed to communication technology, such as a new type of printing press or movie camera. Today, companies must also be aware of business method patents, a phenomenon that has emerged in the last decade or so and has taken on particular significance in connection with the Internet.

For example, as soon as Netflix obtained a patent for its online DVD rental model in April 2006, it sued Blockbuster, which had launched its own online rental service about a year before, for patent infringement, arguing that Blockbuster knew of the pending patent application at the time it "willfully and deliberately" initiated its rental service.<sup>64</sup> Netflix and Blockbuster finally settled their lawsuit in June 2007.

Similarly, IBM obtained a patent entitled "Method for Presenting Advertising in an Interactive Service"<sup>65</sup> and sued Amazon.com for patent infringement. However, because IBM's patent arguably covers online advertising, it has implications for any media company that engages in Internet advertising.

Courts first clarified that business methods are patentable in 1998. Prior to that time, courts generally considered business methods to be an exception to patentable subject matter under § 101.<sup>66</sup> The focus of the exception was the concept that ideas per se could not be patented and that business methods were nothing more than ideas.<sup>67</sup> In 1998, the Federal Circuit issued its landmark decision in *State Street Bank & Trust Co. v. Signature Financial Group*, in which the court rejected the exception, declaring that it had never been invoked by the Federal Circuit to hold an invention unpatentable, and held that if a business method ultimately yields a "useful, concrete, and tangible result," such as an operable business system, it complies with the requirement of

statutory usefulness.<sup>68</sup> The *State Street* decision opened the "proverbial floodgates" for these types of patents.<sup>69</sup>

The *State Street* decision also fueled a debate, both in the literature and before Congress, between those who supported the newly patentable business methods and those who were opposed to the new class of patents.<sup>70</sup> The controversy resulted in the USPTO's creating a new class for business method patents (Class 705) and setting out new requirements for evaluating such patents.<sup>71</sup>

The controversy over the patentability of business methods caught the public's attention when Amazon.com sued Barnesandnoble.com, its main competitor at that time for Internet-based book and media retailing, for infringing its patent covering a method for Internet commerce involving the storage of customer information, such as addresses and credit card numbers, in a vendor's database.<sup>72</sup> When a repeat user logged into the system, items could be purchased from the vendor using a single mouse click without having to reenter address and credit card data.<sup>73</sup> The district court's granting of a preliminary injunction against Barnesandnoble.com's use of its "Express Lane" shopping feature allowing users to "Buy [a product] now with just 1 click!" just added further fuel to those critical of patenting business methods, who considered this to be an obvious concept.<sup>74</sup> Although the Federal Circuit did not uphold the preliminary injunction, it concluded that there was likely infringement on the part of Barnesandnoble.com.<sup>75</sup>

Although Amazon.com's one-click business method patent may not be of particular interest to the communications industry, other Internet-related business method lawsuits are noteworthy (see sidebar on pages 26-27). They demonstrate that several rather commonplace methods of Internet-based advertising and consumer transactions have been, or are, the subject of pending patent infringement claims.

### Changing Patent Law Landscape

Interpretation and application of patent law in the United States is in a state of flux, not only because the Supreme Court has handed down a number of decisions reversing long-standing Federal Circuit precedent, but also because Congress is actively engaged in considering radical patent reforms.

These new precedents and many aspects of the suggested patent reforms will be especially relevant for business method and Internet patents. In fact, the lower courts' implementation of the recent Supreme Court decisions is already having an effect on such patents.

The reaction of all three branches of government is likely due in part to the development over recent years of a cottage industry of patent owner-friendly federal courts. Forum shopping has become an art form. These courts have special procedural rules for patent cases that generally put the cases on a fast track, making it expensive and difficult for alleged infringers to defend against the patent owners. Ten years ago, the Eastern District of Texas had very few patent cases; today, after adopting rules favoring patent plaintiffs, some say it is the busiest patent district court in the nation.<sup>76</sup> These patent cases put tens, if not hundreds of millions, of dollars at risk for the parties and help drive the local economy through forced legal tourism (which may be the motivation behind the rule changes because the plaintiff generally selects the venue).

### Supreme Court Sets New Precedent

From the time the Federal Circuit came into existence in 1982, the Supreme Court has rarely delved into the patent law. However, "since Chief Justice John Roberts was elevated to the Court in September 2005," the Court has accepted and reviewed "an atypically high number of patent cases," most likely because of "his interest in cases involving technology issues and intellectual property."<sup>77</sup> These decisions have significantly altered the way in which patents must be treated by the lower courts, and many commentators are of the opinion that they have shifted the balance "in favor of those challenging the patent rights of others."<sup>78</sup>

The Supreme Court decision that has had the most pervasive impact on obtaining, enforcing, and defending against patents is *KSR International Co. v. Teleflex Inc.*<sup>79</sup> This case instantly "made it more difficult[,] in the first instance, for an inventor to obtain a patent from the [USPTO], and, at the same time, easier for [] alleged infringer[s] to challenge the validity of an issued patent on obviousness grounds."<sup>80</sup> In this case,

[t]he Teleflex patent at issue . . .

## Noteworthy Business Matter Patents Related to the Internet

- U.S. Patent Nos. 5,933,811 and 5,937,392 have been issued to DoubleClick Inc. for methods of delivering advertising over the Internet.
- Walt Disney Co., the second-largest U.S. media company, and OpenTV settled a patent infringement lawsuit in 2004 over an interactive TV system that Disney employed during broadcasts of shows such as Sunday Night Football and Monday Night Football and Who Wants to Be a Millionaire. Disney agreed to pay royalties to OpenTV, which owns the three patents at issue in the lawsuit,<sup>a</sup> all of which pertain to integrating Web resources into interactive TV programming.<sup>b</sup>
- Google paid Yahoo! 2.7 million shares of stock (valued at over \$260 million) to settle a lawsuit involving some of Yahoo!'s online search engine advertising patents.<sup>c</sup>
- BTG, a London-based intellectual property licensing company with over 3,500 patents, sued Amazon, Barnes & Noble, Netflix, and other Internet enterprises for infringing patents related to user tracking and marketing methods. In early 2005, BTG filed suit against Microsoft and Apple Computer for infringement of Internet software update patents.<sup>d</sup>
- Intertainer, Inc., a technology licensing company, sued Apple, Google, and Napster for infringing its patent<sup>e</sup> covering the commercial distribution of audio and video over the Internet.<sup>f</sup>
- In October 2006, IBM sued Amazon.com for infringement of several patents, including U.S. Patent No. 7,072,849, entitled "Method for

Presenting Advertising in an Interactive Service."<sup>g</sup> The lawsuit was settled in May 2007, when Amazon agreed to pay IBM an undisclosed sum in return for a long-term patent cross-license agreement.<sup>h</sup>

- On December 17, 2007, XM Satellite Radio announced that it had settled a patent infringement suit brought against it by Universal Music Group in connection with XM's portable Inno device, which can store and record music from satellite radio.<sup>i</sup>
- Internet market research company NetRatings Inc., whose Web analytics tool collects information about Web surfers' habits, recently reached a licensing agreement and settlement in the infringement suit it brought against WhenU.com Inc., which focuses on targeted advertising, i.e., delivering ads based on certain preferences or context.<sup>j</sup>
- Shares in TiVo Inc. posted close to a 29 percent gain on January 31, 2008, after it was announced that the DVR (digital video recorder) manufacturer had won a patent infringement suit against satellite television company EchoStar Communications. The Federal Circuit affirmed a lower court ruling determining that EchoStar's DVRs infringed TiVo's patented "time warp" technology, and upheld the damage award of nearly \$74 million.<sup>k</sup>
- Paid Search Engine Tools LLC, a patent-holding company, filed suit against Google and Microsoft on February 12, 2008, alleging that the companies' paid advertisement

covered an adjustable vehicle gas pedal control with an attached pedal position sensor. Prior art patents taught each part [of the invention] individually, but none seemed to clearly suggest combining the two components. . . . [T]he Court held that mounting an available sensor on a fixed pivot point of the prior art pedal was a design step well within

the grasp of a person of ordinary skill in the relevant art and that the benefit of doing so would be obvious.<sup>81</sup>

The *KSR* decision criticized the rule developed and rigidly applied by the Federal Circuit "that obviousness may be found only where there is a specific 'teaching, suggestion, or motivation' in the prior art to combine prior art references, and, instead, held that '[a]

services (AdWords and AdCenter, respectively) infringed a patent for technology providing search engine keyword bidders with information to optimize their use of paid search engines. Paid Search Engine Tools previously sued Yahoo! in September 2007 alleging that unspecified Yahoo! products and services infringed the same patent.<sup>1</sup>

## Endnotes

a. Enhanced Video Programming System and Method for Incorporating and Displaying Retrieved Integrated Internet Information Segments, U.S. Patent Nos. 5,774,664, 5,778,181, 6,018,768 (respectively issued June 30, 1998; July 7, 1998; Jan. 25, 2000).

b. Susan Decker, *Disney, OpenTV Settle Patent Suit*, OAKLAND TRIB., available at [http://findarticles.com/p/articles/mi\\_qn4176/is\\_20040708/ai\\_n14579191/print](http://findarticles.com/p/articles/mi_qn4176/is_20040708/ai_n14579191/print).

c. Verne Kopytoff, *Google Settles 2 Disputes over Patent Infringement*, S.F. CHRON., Aug. 10, 2004, at C1, cited in Moss & Frankel, *supra* note 69, at 6.

d. Scarlet Pruitt, *BTG Hits Amazon, Netflix and Others with Patent Suit*, INFOWORLD, Sept. 15, 2004, cited in Moss & Frankel, *supra* note 69, at 6.

e. Digital Entertainment Service Platform, U.S. Patent No. 6,925,469 (issued Aug. 2, 2005).

f. John Markoff & Miguel Helft, *Patent Lawsuit Names Leading Technology Firms*, N.Y. TIMES (Jan. 3, 2007), available at [www.nytimes.com/2007/01/03/technology/03patent.html?\\_r=1&oref=slogin&page\\_wanted=print](http://www.nytimes.com/2007/01/03/technology/03patent.html?_r=1&oref=slogin&page_wanted=print).

g. Jesse Greenspan, *IBM Calls Out Amazon for Violating Its Patents*, IP L. 360 (Oct. 24, 2006); DAVID BERLIND, WHY IBM'S PATENT SUIT AGAINST AMAZON COULD BE BAD NEWS FOR THE ENTIRE WEB, available at <http://blogs.zdnet.com/BTL/?p=3848>.

h. Elaine Chow, *Amazon, IBM Settle Internet Patent Dispute*, IP L. 360 (May 9, 2007).

i. *XM Settles Patent Lawsuit with Universal Music*, C/NET NEWS, available at [www.news.com/2102-1027\\_3-6223235.html?tag=st.util.print](http://www.news.com/2102-1027_3-6223235.html?tag=st.util.print). The patent that XM Satellite Radio's device was alleged to infringe is Electronic Music/Media Distribution System, U.S. Patent No. 7,209,892 (issued Apr. 24, 2007).

j. Elizabeth Landau, *NetRatings Agrees to Patent License with WhenU*, IP L. 360 (Jan. 9, 2008).

k. *TiVo Wins DVR Patent Lawsuit Against EchoStar Communications*, TELECOMM. INDUSTRY NEWS, available at [www.teleclick.ca/2008/02/tivo-wins-dvr-patent-lawsuit-against-echostar-communications/](http://www.teleclick.ca/2008/02/tivo-wins-dvr-patent-lawsuit-against-echostar-communications/).

l. Ryan Davis, *Google, Microsoft Face Patent Suit over Ads*, IP L. 360 (Feb. 15, 2008). The patent at issue in both the Yahoo! and Google/Microsoft litigation is Paid Search Engine Bid Management, U.S. Patent No. 7,043,450 (issued May 9, 2006).

court must ask whether the improvement is more than the predictable use of prior-art elements according to their established functions."<sup>82</sup>

Numerous Federal Circuit and district court decisions, and literally hundreds of Board of Patent Appeals and Interferences decisions, citing *KSR*, have already impacted the issuance of patents, as well as the validity of issued

patents. For example, in the five months after *KSR* was decided, the Federal Circuit issued nine precedential decisions assessing the obviousness of an invention, six holding the invention to be obvious, two holding the invention to be nonobvious, and one vacating the district court's decision and remanding for further consideration.<sup>83</sup> Six months after *KSR* was decided, the USPTO published its "Examination Guidelines for Determining Obviousness Under 35 U.S.C. §103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*"<sup>84</sup> The USPTO Technology Center on Business Methods recently issued *KSR Training Examples* for rejecting applications for business method patents on obviousness grounds.<sup>85</sup>

In *eBay Inc. v. MercExchange, LLC*,<sup>86</sup> the Supreme Court "took away from patent holders the previously almost automatic right to enjoin an infringer from continuing to use a patented invention after infringement had been shown at trial."<sup>87</sup> In the original decision in 2003, the district court awarded MercExchange damages, but no injunction, after it found that eBay's "Buy it Now" feature infringed two MercExchange patents allowing shoppers to purchase items without first participating in an auction.<sup>88</sup> When MercExchange appealed, the Federal Circuit ruled that an injunction was warranted, basing its decision on the theory that injunctions should be denied in patent cases only under exceptional circumstances.<sup>89</sup> The Supreme Court reversed, holding "that trial judges should apply the traditional permanent injunction four-factor balancing test" in patent cases to determine if a post-infringement verdict injunction should be granted.<sup>90</sup>

Subsequent district court decisions applying *eBay* have held that nonpracticing patentees (e.g., licensing entities and companies that buy patents to use them to sue other companies) are generally not entitled to injunctive relief. For example, in *z4 Technologies, Inc. v. Microsoft Corp.*,<sup>91</sup> *Finisar Corp. v. DirecTV Group, Inc.*,<sup>92</sup> and *Paice LLC v. Toyota Motor Corp.*,<sup>93</sup> as well as the remanded case of *MercExchange, LLC v. eBay, Inc.*,<sup>94</sup> the district court denied plaintiff's request for a permanent injunction, based largely on findings that there was no irreparable harm and that remedies at law (i.e., damages) would provide adequate compensation. It is of interest

to note that in each of those cases, the patentee was not a competitor and had exhibited a willingness to license its patents elsewhere.<sup>95</sup>

"A little more than a year ago, in January 2007, the Court in *MedImmune, Inc. v. Genentech, Inc.*,<sup>96</sup> [] was asked to consider the parameters under which an existing licensee under a particular patent could challenge that patent" in a declaratory judgment action. Under then-existing Federal Circuit precedent,<sup>97</sup> "a licensee was generally required to forfeit the license to obtain standing to challenge the validity of [the] patent," which MedImmune had not done because it was still paying royalties and thus was not facing "a reasonable apprehension of suit." Under the old rule, before commencing a suit to challenge a patent, "licensees [either] had to stop using the licensed technology" or continue using the technology and stop making payments, thereby risking "the possibility of having to pay enhanced damages and the patentee's attorneys fees should they ultimately not prevail—a powerful disincentive to challenge a patent."<sup>98</sup>

The Supreme Court rejected this rule, holding that a sufficient "case or controversy" exists to allow a case to proceed even when a licensee continues to make royalty payments under the license agreement.<sup>99</sup> In a footnote, the Supreme Court criticized the Federal Circuit's "reasonable apprehension of suit" test,<sup>100</sup> stating that the test to be applied is whether "under all the circumstances, . . . there is a substantial controversy, between parties having adverse legal interests, of sufficient immediacy and reality to warrant the issuance of a declaratory judgment."<sup>101</sup> Post-*MedImmune* decisions have typically focused on implementing this "new" test, and alleged infringers are now experiencing greater success in maintaining declaratory judgment actions against patentees.<sup>102</sup>

## Proposed Reforms

Patent law reform caught Congress's attention after the publication of two studies, one by the Federal Trade Commission<sup>103</sup> and the other by the National Academy of Sciences,<sup>104</sup> which outlined shortcomings of the current patent system and proposed remedial changes. A bill containing some of the most sweeping changes to U.S. patent law in more than fifty years (i.e., since the Patent Act of 1952) was introduced in the House

of Representatives in June 2005,<sup>105</sup> and substitute bills proposing various modifications were introduced in July 2005<sup>106</sup> and October 2005;<sup>107</sup> however, no action was taken on any of the bills. Bills were introduced in both houses of Congress in 2006;<sup>108</sup> and although hearings were held on patent reform,<sup>109</sup> no action was taken on the proposed bills.

Congress again turned its attention to patent reform in April 2007, when identical bills, H.R. 1908 and S. 1145, were introduced in both houses of Congress.<sup>110</sup> Some of the major patent law changes proposed include:

- changing from a first-to-invent system to a first-inventor-to-file system;
- changing the method for apportioning damages (i.e., calculating a reasonable royalty);
- heightening standards for finding willful infringement;
- expanding the prior user rights defense;
- establishing a post-grant opposition proceeding in the USPTO;
- changing the procedure for reexamination of patents;
- requiring publication of all patent applications eighteen months after filing;
- providing for pre-issuance submission to the USPTO of prior art by third parties;
- limiting where patent actions can be brought to curtail the practice, discussed above, of forum shopping by plaintiffs seeking venues with pro-patent holder rules and procedures (e.g., Texas);
- allowing interlocutory appeals to the Federal Circuit on claim construction determinations; and
- codifying inequitable conduct law.<sup>111</sup>

These bills prompted a great deal of written commentary,<sup>112</sup> testimony from a number of prominent industry leaders,<sup>113</sup> and letters from Federal Circuit Chief Judge Paul R. Michel,<sup>114</sup> the Departments of Commerce and Justice,<sup>115</sup> industry coalitions,<sup>116</sup> and members of Congress.<sup>117</sup> Each of the bills has been amended several times so that they no longer have identical provisions.<sup>118</sup>

On September 7, 2007, the House of Representatives passed H.R. 1908, including significant amendments deleting expansion of prior user rights, diluting

the requirement for publishing all patent applications after eighteen months, inserting new language on inequitable conduct, inserting language making tax methods unpatentable, adopting new language on venues for patent suits, and rewriting some of the language on the controversial apportionment of damages provision.<sup>119</sup> Although S. 1145—with significant amendments on apportioning damages, expanding prior user rights, and repealing inter partes reexamination—was reported out of the Senate Judiciary Committee, no further action was taken on the bill in 2007.<sup>120</sup>

Interest in the passage of patent reform legislation resurfaced this year with the publication of the Senate Judiciary Committee's draft report on S. 1145 on January 31, 2008.<sup>121</sup> But the controversy over various provisions of the proposed bills continues, fueled by the publication of a white paper by two former USPTO officials that labels some of the proposed changes as "problematic,"<sup>122</sup> a study released by the Biotechnology Industry Organization charging that there is a lack of empirical data supporting such reforms,<sup>123</sup> administration opposition to proposed changes in the apportionment of damages,<sup>124</sup> and continued industry opposition.<sup>125</sup>

Generally, most of the controversy over the bills' provisions has been voiced by pharmaceutical, biotech, and certain other industries, which rely heavily on their patent portfolios and claim that some of the proposed reforms will weaken patent protection; and high technology industries and financial services firms, which are less dependent on patent protection for their own innovations and support the proposed reforms asserting that they will reduce frivolous infringement lawsuits.<sup>126</sup>

What is clear, however, is that whatever form the patent reform legislation ultimately passed by Congress takes, it will have a significant impact on issued patents as well as pending and future patent applications.

### Risks of Patent Infringement

Companies that use or license various forms of technology in conducting their business run the risk of being targeted by patent holders (both those who actively practice their inventions and those pejoratively referred to as "patent trolls,"<sup>127</sup> who purchase patents and then seek out potential infringers to sue) as

potential defendants in an infringement lawsuit. The typical way that a company finds out it has been so targeted is when it receives a cease-and-desist letter. To constitute actual notice of infringement, the recipient of the letter must be "informed of the identity of the patent and the activity that is believed to be an infringement, accompanied by a proposal to abate the infringement, whether by license or otherwise."<sup>128</sup>

Such letters usually target the "deep-pocket" media company rather than the company's "shallow-pocket" software vendor or website designer. Any infringement indemnification from the vendor or designer is only as good as the company behind it (and that company's financial resources). Patent plaintiffs are increasingly being funded by venture capital groups, which view these cases as potentially lucrative investments.

Although each case is different, a cease-and-desist letter should not be ignored because its sender is most likely prepared to file a lawsuit. Continued infringement of the patent identified in a cease-and-desist letter can be considered willful infringement if the company is found to infringe, leading to the imposition of not only enhanced damages (up to treble) for any sales after receipt of the letter<sup>129</sup> but also possibly the attorney fees of the patent owner.<sup>130</sup>

Upon receipt of such a letter, the recipient may have an opportunity to commence a declaratory judgment action to avoid being sued in a patent owner-friendly jurisdiction. As noted above, the Supreme Court recently made it easier to commence a patent declaratory judgment action.<sup>131</sup>

One of the most effective defenses against a charge of willful infringement is an opinion letter from competent patent counsel. Although the Federal Circuit recently abandoned the "affirmative duty" standard (which required an alleged infringer to investigate potential infringement and verify that a company's activities did not infringe) and established an "objective recklessness" test for determining willful infringement that does not require obtaining an opinion of counsel,<sup>132</sup> the need for such opinion letters has not been eliminated. Whether a businessperson has acted reasonably in response to a cease-and-desist letter is still an inherently subjective analysis depending on all relevant circumstances.<sup>133</sup> Preparation of an opinion letter involves

interpreting the scope of the patent claims, comparing the claims to the allegedly infringing product, analyzing the relevant patent law, and summarizing the opinion (i.e., whether the allegedly infringing product infringes the patent and/or whether the patent is invalid);<sup>134</sup> thus, only competent patent counsel should prepare such a letter. Opinions prepared by engineers, businesspeople, or non-patent counsel may be found insufficient to prevent a finding of willfulness.

Patent infringement may also be avoided by designing around (i.e., developing alternatives to a patented invention) a patent's claims that cover the alleged infringer's products or processes.<sup>135</sup> Patent counsel can assist in performing the analysis necessary to determine how to design around the patented product or process.<sup>136</sup>

Patent infringement litigation can be very costly. A recent survey by the American Intellectual Property Law Association indicates that such litigation can cost an average of \$2.6 million where \$1 million to \$25 million is at risk, and an average of \$5.5 million where more than \$25 million is at risk.<sup>137</sup> The cost of discovery alone can average \$3,340,000 in litigations where greater than \$25,000,000 is at risk.<sup>138</sup> Therefore, another option that a recipient of a cease-and-desist letter may want to consider is licensing the allegedly infringed patent. Consulting patent counsel in connection with the negotiation of such a license (or even cross-licensing) is advisable.

One possible means of dealing with the costs of patent infringement litigation, as well as the risk of paying damages for any alleged infringement, is to purchase a patent insurance policy because most general liability insurance policies do not provide such coverage.<sup>139</sup> Although there are various types of insurance available providing coverage for intellectual property claims,<sup>140</sup> such insurance is difficult to obtain and is not inexpensive: deductibles in the United States are usually 20 percent of the amount of the policy, and coinsurers often require policyholders to share between 10 percent and 20 percent of the risk.<sup>141</sup> Although some of the cheaper defensive insurance policies (i.e., those that take effect when the policyholder is sued for patent infringement) only cover legal expenses, most policies cover damages and defense costs, with premiums

running between 2 percent and 5 percent of the insured amount.<sup>142</sup> Determining whether obtaining such insurance makes sense requires that a company be able to value the intellectual property at issue, assess how likely litigation may be, and decide whether the company can absorb litigation costs.<sup>143</sup> This is another task in which patent counsel can assist.

### Conclusion

Although patent law is evolving, it is clear that patents are pervasive and will take on an increasingly significant role in the communications industry. Businesses that use patents to protect their ideas and take care to avoid the patents of others will have a significant competitive advantage. Businesses that ignore patents will lose the ability to thwart competitors or, worse, find themselves defendants in costly patent infringement suits. 

### Endnotes

1. U.S. CONST. art. I, § 8, cl. 8 (original capitalization omitted).
2. *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 262 (1979).
3. *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 229 (1964); *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 599–600 (Fed. Cir. 1985).
4. *See* 35 U.S.C. § 154.
5. *See* MANUAL OF PATENT EXAMINING PROCEDURE § 608.01 (8th ed., 2007) [hereinafter MPEP].
6. *See* 37 C.F.R. § 1.72; MPEP, *supra* note 5, § 608.01(b).
7. *Hoechst-Roussel Pharms. v. Lehman*, 109 F.3d 756, 758 (Fed. Cir. 1997) (citing *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251 (Fed. Cir. 1989)).
8. The patent term for patent applications filed before June 8, 1995, and for patents in force on June 8, 1995, is the longer of twenty years from the filing date or seventeen years from the issue date. The change in patent term for applications filed on or after June 8, 1995, which was effected by the passage of the General Agreement on Tariffs and Trade (GATT) in 1994, was instituted “to harmonize the term provision of United States patent law with that of our leading trading partners which grant a patent term of 20 years from the date of filing of the patent application.” *Merck & Co. v. Kessler*, 80 F.3d 1543, 1547 (Fed. Cir. 1996), *cert. denied sub nom.*, *Organon, Inc. v. Kessler*, 519 U.S. 1101 (1997); *see* 35 U.S.C. § 154(a) (2), as added by Uruguay Round Agreements Act § 532(a)(1), Pub. L. No. 103–465, 108 Stat. 4809, 4984 (Dec. 8, 1994).

9. DONALD S. CHISUM, CHISUM ON PATENTS § 1.01 (2007).
10. 35 U.S.C. § 171.
11. U.S. Pat. No. 413,105 (issued Aug. 24, 1999).
12. 35 U.S.C. § 173.
13. ROGER M. MILGRIM, MILGRIM ON TRADE SECRETS § 1.01[1] (2007).
14. *See id.* § 1.03.
15. *Id.* § 1.05[2].
16. *Id.* § 7.02[1][a].
17. *Id.* § 1.01[2][1].
18. *Id.* § 1.01[2][a].
19. CHISUM, *supra* note 9, § 19.04[3][d].
20. MILGRIM, *supra* note 13, § 7.02[1][a].
21. 17 U.S.C. §§ 102, 302.
22. 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 6:3 (4th ed. 2007).
23. *See Amni Innovation Corp. v. Anthony Calif., Inc.*, 439 F.3d 1365, 1367–68 (Fed. Cir. 2006).
24. BRUCE P. KELLER & JEFFREY P. CUNARD, COPYRIGHT LAW §§ 1:2:5–1:2:6 (2007).
25. *Sony Computer Entm't, Inc. v. Connectix Corp.*, 203 F.3d 596, 602–03 (9th Cir. 2000).
26. 1 MCCARTHY, *supra* note 22, § 3.1; 3 *id.* §§ 17:5–17:9, 19:134.
27. 1 MCCARTHY, *supra* note 22, *Id.* § 3.1.
28. The ™ symbol may be used when trademark rights are claimed in relation to a mark but the mark has not been registered with the USPTO. However, the ® symbol is used when the mark has been appropriately registered.
29. 5 MCCARTHY, *supra* note 22, §§ 27:14, 27:16, 26:27, 26:33.
30. 3 MCCARTHY, *supra* note 22, §§ 17:9–17:13.
31. *Id.* §§ 20:53–20:55.
32. 35 U.S.C. §§ 101–103.
33. 35 U.S.C. § 101.
34. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).
35. *Id.*
36. *Id.*
37. 548 U.S. 124 (2006).
38. 500 F.3d 1346, 1357 (Fed. Cir. 2007), *reh'g en banc denied*, No. 2006–1371, 2008 WL 361044, at \*1 (Fed. Cir. Feb. 11, 2008) (Judge Linn, joined by Judges Pauline Newman and Randall R. Rader, dissented, arguing that the court's decision conflicts with Federal Circuit and Supreme Court precedent).
39. 499 F.3d 1365, 1379–80 (Fed. Cir. 2007).
40. Appeal 2007-1130 (Fed. Cir. Feb. 15, 2008).
41. *Id.*
42. 35 U.S.C. § 101.
43. 35 U.S.C. § 101.

44. *Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1180 (Fed. Cir. 1991).
45. *Id.*
46. *See Tol-O-Matic, Inc. v. Proma Produkt-Und Mktg. Gesellschaft m.b.H.*, 945 F.2d 1546, 1552–53 (Fed. Cir. 1991).
47. *Id.* at 1552.
48. ALAN L. DURHAM, *PATENT LAW ESSENTIALS: A CONCISE GUIDE* 64 (1999).
49. 35 U.S.C. § 102.
50. *See* C.E. Polk, Jr., & J.R. Spivey, *Patent Law Basics: Understanding the United States Patent System*, NAT'L B. ASS'N MAG. 16, 17 (Mar./Apr. 2001).
51. 35 U.S.C. § 103.
52. *Id.*
53. 383 U.S. 1 (1966).
54. *Id.* at 17.
55. *See id.* at 17–18, 35–36.
56. 35 U.S.C. § 112.
57. USPTO Guidelines for Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1, “Written Description” Requirement, 66 Fed. Reg. (Jan. 5, 2001); *see In re Alton*, 76 F.3d 1168, 1175 (Fed. Cir. 1996).
58. *Minn. Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1301, 64 U.S.P.Q.2d 1270, 1278 (Fed. Cir. 2002).
59. *See Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1371 (Fed. Cir. 1999) (noting that determining whether experimentation is undue includes consideration of the following factors: “(1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims” (citation omitted)).
60. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209–10 (Fed. Cir. 1991) (“The best mode requirement thus is intended to ensure that a patent applicant plays ‘fair and square’ with the patent system. It is a requirement that the *quid pro quo* of the patent grant be satisfied. One must not receive the right to exclude others unless at the time of filing he has provided an adequate disclosure of the best mode known to him of carrying out his invention. Our case law has interpreted the best mode requirement to mean that there must be no concealment of a mode known by the inventor to be better than that which is disclosed.”).
61. *See* 35 U.S.C. § 102.
62. *See* MPEP, *supra* note 5, § 601.
63. *Id.*
64. Approach for Renting Items to Customers, U.S. Patent No. 7,024,381 (issued Apr. 4, 2006).
65. Method for Presenting Advertising in an Interactive Service, U.S. Patent No. 7,072,849 (issued July 4, 2006).
66. *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368, 1375 (Fed. Cir. 1998).
67. *See Hotel Sec. Checking Co. v. Lorraine Co.*, 160 F. 467 (2d Cir. 1908).
68. *State St.*, 149 F.3d at 1375; *see also* AT&T Corp. v. Excel Commc'ns, Inc., 172 F.3d 1352, 1357 (Fed. Cir. 1999) (recognizing patentability of computer-based inventions that apply a mathematical principle to produce a useful, concrete, tangible result).
69. Kevin Moss & Aaron Frankel, *Business Methods: Are They Patentable and How to Protect Them*, NIPLA BULL. 1 (Sept./Oct. 2005) (citing Robert E. Lyon & Christopher A. Vanderlaan, *Method Madness*, L.A. LAW. 28, 28 (Oct. 23, 2000)).
70. *See, e.g.,* Radhika Tandon, *Moving Forward: Patentability of Software and Business Method Patents*, 6 INTELL. PROP. L. BULL. 1, \* 3 (2001); Julia Gladstone, *Why Patenting Information Technology and Business Methods Is Not Sound Policy: Lessons from History and Prophecies for the Future*, 25 HAMLINE L. REV. 217, 219 (2002); *see* Business Method Patent Improvement Act of 2000, H.R. 5364, 106th Cong. (2000); Business Method Patent Improvement Act of 2001, H.R. 1332, 107th Cong. (2001); Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005) (none of which were enacted into law).
71. *See* Alexandra Wilson, *Business Method Patents Gone Wild: Narrowing State Street Bank and Shifting to a European Perspective*, 12 J. TECH. L. & POL'Y 71, 72 (June 2007).
72. Method and System for Placing a Purchase Order Via a Communications Network, U.S. Patent No. 5,960,411 (issued Sept. 28, 1999).
73. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1347–48 (Fed. Cir. 2001).
74. *See, e.g.,* DOC SEARLS, TALKING PATENTS, available at [www.linuxjournal.com/print/5231](http://www.linuxjournal.com/print/5231).
75. *Amazon.com, Inc.*, 239 F.3d at 1366.
76. Marcia Coyle, *East Texas Now Busiest Patent Litigation Venue*, NAT'L L.J. 6 (Nov. 12, 2007).
77. *See* Randy Lipsitz, Richard Moss & Aaron Frankel, *Supreme Court Tackles Patent Cases*, KRAMER LEVIN INTELL. PROP. ALERT (Jan. 2008).
78. *Id.*; *see, e.g.,* Stephen G. Kunin & Andrew K. Beverina, *KSR's Effect on Patent Law*, 106 MICH. L. REV. FIRST IMPRESSIONS 50 (2007); Jesse Greenspan, *KSR Leads to Increase in Obviousness Invalidations*, IP L. 360 (Oct. 26, 2007); Charles R. Macedo & Michael J. Kasdan, *Infringement Assertions in the New World Order*, IP L. 360 (Oct. 18, 2007); Bryan Zerhusen, *Non-Pioneering Technologies Beware*, IP L. 360 (Oct. 24, 2007); Esther H. Steinhauer, *Pharmaceutical Patents After KSR*, FDLI UPDATE 39 (Sept./Oct. 2007); David L. Fox, *The Elimination of a Patent Licensing “Safe Haven,”* IP L. 360 (Apr. 3, 2007); Jeffrey M. Fisher & Robert H. Sloss, “MedImmune” *Ushers in New Era of Patent Litigation*, IP L. 360 (Jan. 16, 2007).
79. 127 S. Ct. 1727 (2007).
80. Lipsitz, Moss & Frankel, *supra* note 77, at 1.
81. *Id.*; *see also* KSR, 127 S. Ct. at 1743.
82. Lipsitz, Moss & Frankel, *supra* note 77 (citing KSR, 127 S. Ct. at 1731).
83. *Aventis Pharma Deutschland GmbH v. Lupin, Ltd.*, 499 F.3d 1293 (Fed. Cir. 2007) (nonobviousness of formulation of blood pressure medicine Rampiril “substantially free of other isomers” reversed); *Forest Labs., Inc. v. IVAX Pharm., Inc.*, 501 F.3d 1263 (Fed. Cir. 2007) (nonobviousness of invention directed to substantially pure isomer of antidepressant drug Citalopram affirmed); *In re Sullivan*, 498 F.3d 1345 (Fed. Cir. 2007) (vacating Board of Patent Appeals and Interferences decision that claimed antivenom composition comprising antibody fragments that bind to particular species of rattlesnake venom was obvious because decision did not consider all evidence of nonobviousness); *In re Trans Tex. Holdings Corp.*, 498 F.3d 1290 (Fed. Cir. 2007) (affirming Board of Patent Appeals and Interferences ruling that claims directed to system of inflation-adjusted deposit and loan accounts were obvious); *In re Icon Health & Fitness, Inc.*, 496 F.3d 1374 (Fed. Cir. 2007) (affirming Board of Patent Appeals and Interferences obviousness determination regarding claims directed to gas spring as means for retaining folding mechanism on treadmill in folded position); *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342 (Fed. Cir. 2007) (reversing denial of defendants’ motion for judgment as a matter of law that claims directed to cryopreserved umbilical cord stem cells that can be used to reconstitute a person’s immune system were obvious, and holding patents to be obvious); *Takeda Chem. Indus., Ltd. v. Alphapharm Party, Ltd.*, 492 F.3d 1350 (Fed. Cir. 2007) (affirming nonobviousness of patent directed to particular compounds useful for treating diabetes); *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157 (Fed. Cir. 2007) (affirming obviousness of interactive learning device to help young children read phonetically); *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254 (Fed. Cir. 2007) (reversing district court’s incorrect ruling on level of ordinary skill in the art, which caused court to inadequately consider

importance of reference rendering invention for method of treating bacterial ear infections via topical administration of antibiotic Ofloxacin obvious).

84. 72 FED. REG. 57,526 (Oct. 10, 2007).

85. USPTO TECH. CTR. ON BUS. METHODS, KSR TRAINING EXAMPLES—TC 3600—BUSINESS METHODS (2008) (TC3600 Business Methods Pilot).

86. 126 S. Ct. 1837 (2006).

87. Lipsitz, Moss & Frankel, *supra* note 77.

88. MercExchange, LLC v. eBay, Inc., 275 F. Supp. 2d 695 (E.D. Va. 2003).

89. MercExchange, LLC v. eBay, Inc., 401 F.3d 1323, 1339 (Fed. Cir. 2005).

90. Lipsitz, Moss & Frankel, *supra* note 77; *see also* eBay, 126 S. Ct. at 1839–40 (The four-factor test requires that a plaintiff demonstrate (1) irreparable injury, (2) that monetary damages are not an adequate remedy, (3) that the balance of hardships favors an injunction, and (4) that the public interest would not be disserved by an injunction.)

91. 434 F. Supp. 2d 437 (E.D. Tex. 2006).

92. No. 1:05-cv-264, 2006 U.S. Dist. LEXIS 76380 (E.D. Tex. July 7, 2006).

93. No. 2:04-cv-211, 2006 WL 2385139 (E.D. Tex. Aug. 16, 2006).

94. 500 F. Supp. 2d 556 (E.D. Va. 2007).

95. Charles R. Macedo & Michael J. Kasdan, *Infringement Assertions in the New World Order*, IP L. 360 (Oct. 18, 2007).

96. 127 S. Ct. 764 (2007).

97. Lipsitz, Moss & Frankel, *supra* note 77; *see, e.g.*, Gen-Probe, Inc. v. Vysis, Inc., 359 F.3d 1376 (Fed. Cir. 2004).

98. Lipsitz, Moss & Frankel, *supra* note 77, at 1–2.

99. *Id.*; *see also* MedImmune, 127 S. Ct. at 777.

100. MedImmune, 127 S. Ct. at 776 n.11.

101. *Id.* at 771.

102. *See* Teva Pharms. USA, Inc. v. Novartis Pharms. Corp., 482 F.3d 1330, 1341 (Fed. Cir. 2007) (reversing dismissal of Teva's declaratory judgment action on the grounds Teva asserted as creating "actual controversy" were sufficient to confer jurisdiction when "taken as a whole"); Sony Elecs., Inc. v. Guardian Media Techs., 497 F.3d 1271, 1285 (Fed. Cir. 2007) (vacating dismissal of Sony's declaratory judgment action because detailed infringement analysis provided to Sony by Guardian, which included assertion that Guardian was entitled to over \$31 million in royalties, was sufficient to make the dispute "definite and concrete, touching the legal relation of parties having adverse legal interests"); SanDisk Corp. v. STMicroelectronics, Inc., 480 F.3d 1372, 1383 (Fed. Cir. 2007) (vacating dismissal of SanDisk's declaratory judgment action because detailed

infringement analysis given to SanDisk during license negotiations was sufficient to give rise to declaratory judgment jurisdiction and because STMicroelectronics had "engaged in a course of conduct that shows a preparedness and willingness to enforce its patent rights" despite an oral promise not to sue).

103. FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY (Oct. 2003).

104. NAT'L RESEARCH COUNCIL OF THE NAT'L ACADS. OF SCI., A PATENT SYSTEM FOR THE 21ST CENTURY (Stephen A. Merrill, Richard C. Levin & Mark B. Myers, eds., Apr. 2004).

105. The Patent Act of 2005, H.R. 2795, 109th Cong. (June 8, 2005).

106. Amendment in the Nature of a Substitute to H.R. 2795, The "Patent Act of 2005," H.R. 2795, 109th Cong. (July 26, 2005).

107. Amendment in the Nature of a Substitute to H.R. 2795, The "Patent Act of 2005": Coalition Draft, H.R. 2795, 109th Cong. (Sept. 1, 2005).

108. Patents Depend on Quality Act of 2006, H.R. 5096, 109th Cong. (2006); Patent Reform Act of 2006, S. 3818, 109th Cong. (2006).

109. *Patent Quality Enhancement in the Information-Based Economy: Hearing Before the Subcomm. on Courts, the Internet and Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. (Apr. 4, 2006); *Patent Harmonization: Hearing Before the Subcomm. on Courts, the Internet and Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. (Apr. 27, 2006); *Perspectives on Patents: Post-Grant Review Procedures and Other Litigation Reform: Hearing Before the Subcomm. on Courts, the Internet and Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. (May 23, 2006); *Patent Trolls: Fact or Fiction?: Oversight Hearing Before the Subcomm. on Courts, the Internet and Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. (June 15, 2006).

110. Patent Reform Act of 2007, H.R. 1908, 110th Cong. (2007); Patent Reform Act of 2007, S. 1145, 110th Cong. (2007).

111. *See* INTELLECTUAL PROP. OWNERS ASS'N, PATENT REFORM (110TH CONGRESS): A COMPARISON OF H.R. 1908 (AS PASSED BY THE HOUSE) AND S. 1145 (AS REPORTED OUT OF THE SENATE JUDICIARY COMMITTEE) HIGHLIGHTING PRIMARY DIFFERENCES (Sept. 17, 2007).

112. *E.g.*, Kathleen B. Carr, *Patent Reform: If It Ain't Broke, Don't Fix It*, IP L. 360 (June 29, 2007); Robert A. Armitage, *Commentary, Now That the Courts Have Beaten Congress to the Punch, Why Is Congress Still Punching the Patent System?*, 106 MICH. L. REV. FIRST IMPRESSIONS 43 (2007); Bruce Sewall, *Patent*

*Nonsense*, WALL ST. J., July 12, 2007, at A15 David P. Vandagriff & James F. McKeown, *Patent Reform Act: It Has Everything an Infringer Could Want*, WALL ST. J., July 28, 2007, at A7 (responding to Bruce Sewall's article); David L. Fox, *Reform Act Will Undermine Patent Holders' Rights*, IP L. 360 (Aug. 28, 2007).

113. *American Innovation at Risk: The Case for Patent Reform: Oversight Hearing Before the Subcomm. on Courts, the Internet and Intellectual Property of the H. Comm. on the Judiciary*, 110th Cong. (Feb. 15, 2007); *The Patent Reform Act of 2007: Oversight Hearing Before the Subcomm. on Courts, the Internet and Intellectual Property of the H. Comm. on the Judiciary*, 110th Cong. (Apr. 26, 2007); *Patent Reform: The Future of American Innovation: Oversight Hearing Before the S. Comm. on the Judiciary*, 110th Cong. (June 2, 2007).

114. Letter from Paul R. Michel, Fed. Circuit Chief Judge, to Patrick Leahy and Orrin G. Hatch, Senators (May 3, 2007) (charging that making patent claim constructions immediately appealable to the Federal Circuit would overburden the court and criticizing proposed revisions to the Patent Act's damages provisions as creating "a massive undertaking for which courts are ill-equipped"); Letter from Paul R. Michel, Fed. Circuit Chief Judge, to Shanna A. Winters, Staff Member of Representative Howard L. Berman (June 7, 2007) (reiterating his criticism of proposed revisions to the Patent Act's damages provisions as "extremely costly and time consuming"); Letter from Paul R. Michel, Fed. Circuit Chief Judge, to Patrick Leahy and Arlen Specter, Senators (June 13, 2007) (again criticizing making claim constructions immediately appealable to the Federal Circuit and revising the Patent Act's damages provisions).

115. Letter from John J. Sullivan, General Counsel, Department of Commerce, to Howard L. Berman, Representative (May 16, 2007) (providing the USPTO's views on H.R. 1908 provisions and suggesting additional revisions); Letter from Richard A. Hertling, Principal Deputy Assistant Attorney General, Department of Justice, to Patrick Leahy, Senator (June 20, 2007) (expressing reservations about some provisions, as well as concern that the government will be at a disadvantage in defending itself against infringement allegations relating to inventions that it began using long before the patentee but for which it did not seek a patent itself).

116. *E.g.*, Letter from Innovation Alliance to Nancy Pelosi and John Boehner, Representatives, and Harry Reid and Mitch McConnell, Senators (May 15, 2007) (voicing concerns about apportionment of damages, open-ended post-grant patent review, expansive USPTO

rule-making authority, and narrow grace period); Letter from 200 organizations to Patrick J. Leahy and Arlen Specter, Senators, and John Conyers, Jr., Lamar S. Smith, Howard L. Berman, and Howard Coble, Representatives (June 19, 2007) (expressing similar concerns); Letter from Intellectual Property Owners Association to Honorable Jon Dudas, Undersecretary of Commerce, Intellectual Property, and Director, USPTO (June 22, 2007) (setting forth IPO's position on various proposed Patent Act revisions); Letter from AFLCIO to John Conyers and Lamar S. Smith, Representatives (June 24, 2007) (expressing concern about proposed post-patent review process and apportionment of damages); Letter from United Steel Workers to John Conyers, Jr., and Lamar S. Smith, Representatives (July 31, 2007) (expressing similar concerns).

117. *E.g.*, Letter from Christopher S. Bond, Senator, to Patrick J. Leahy and Arlen J. Specter, Senators (Aug. 2, 2007) (setting forth concern over provisions in S. 1145 on inequitable conduct, post-grant review procedures, and apportionment of damages); Letter from sixty-five members of the House of Representatives to Steny H. Hoyer and John A. Boehner, Representatives (Aug. 3, 2007) (urging that floor consideration of H.R. 1908 be postponed to give them "ample opportunity to consider the full implications" of the pending legislation).

118. Patent Reform Act of 2007, Amendment in the Nature of a Substitute to H.R. 1908, 110th Cong. (July 16, 2007) (adding amendments regarding inequitable conduct, venue, best mode modification, study on prior user rights every seven years, and study on first-to-file every seven years; adding court discretion regarding damages; and making tax planning methods not patentable); Patent Reform Act of 2007, H.R. 1908, 110th Cong. (Aug. 2, 2007); Patent Reform Act of 2007, S. 1145 Manager's Amendment in the Nature of a Substitute to S. 1145, 110th Cong. (July 19, 2007) (adding amendments regarding willful infringement damages, inequitable conduct, authority of the USPTO director to accept late filings, limitation on damages, and other remedies with respect to patents for methods in compliance with check-imaging methods and USPTO funding).

119. *See House Passes Modified Patent*

*Reform Bill, Adopting Manager's Amendment, Four Others*, 74 (1834) PAT. TRADEMARK & COPYRIGHT J. 549 (Sept. 14, 2007); *House of Representatives Passes Sweeping Patent Reform Bill over Significant Opposition*, IPO DAILY NEWS (Sept. 10, 2007).

120. *See Senate to Consider Patent Reform Bill Early Next Year*, 4 FDANEWS DEVICE DAILY BULL. 229 (Nov. 11, 2007).

121. SENATE COMM. ON THE JUDICIARY, PATENT REFORM ACT OF 2007 (Jan. 31, 2008) (draft report on S. 1145: "The Patent Reform Act of 2007").

122. GERALD J. MOSSINGHOFF & STEPHEN G. KUNIN, THE NEED FOR CONSENSUS ON PATENT REFORM (Jan. 30, 2008).

123. ANN MILLS & PATTI TERESKERZ, BIOTECHNOLOGY INDUS. ORG., PROPOSED PATENT REFORM LEGISLATION: LIMITATIONS OF EMPIRICAL DATA USED TO INFORM THE PUBLIC POLICY DEBATE (Jan. 30, 2008).

124. Letter from Nathaniel F. Wienecke, Assistant Sec'y of Commerce, Legislative and Intergovernmental Affairs, on behalf of the Bush administration to Patrick J. Leahy, Senator (Feb. 4, 2008) (stating that the administration would oppose S. 1145 "in its entirety" unless the section dealing with damages calculations in patent infringement lawsuits is "significantly revised").

125. *See* Letter from fourteen unions, including the Patent Office Professional Association and United Steelworkers, to the Senate (Feb. 6, 2008) (expressing concern that the changes to the method for calculating damages for infringement, changes to the post-grant procedures, and changes to whose pending patent applications are published prior to the grant of a patent will weaken patent protection); Letter from Electric Frontier Foundation (a nonprofit digital rights advocacy group) to Patrick Leahy and Arlen Specter, Senators (Feb. 4, 2008) (asserting that the post-grant review proposal is "an inadequate substitute for re-examination" and would be more expensive than the current reexamination process).

126. *See e.g., Senate Judiciary Committee Draft Report Suggests Outline for Patent Reform in 2008*, 75 PAT. TRADEMARK & COPYRIGHT J. 271 (Feb. 1, 2008); *Patent Trade Group Lobbied for Reform*, ASSOCIATED PRESS (Feb. 6, 2008), available at [www.forbes.com/feeds/](http://www.forbes.com/feeds/)

[ap/2008/02/06/ap4623281.html](http://ap/2008/02/06/ap4623281.html).

127. Peter Detkin, the former assistant general counsel for Intel, first coined the term *patent troll* in 2001, defining it as "somebody who tries to make a lot of money off a patent that they are not practicing and have no intention of practicing and in most cases never practiced." Brenda Sandburg, *You May Not Have a Choice. Trolling for Dollars*, RECORDER (July 30, 2001), available at [www.phonetel.com/pdfs/LWTrolls.pdf](http://www.phonetel.com/pdfs/LWTrolls.pdf).

128. SRI Int'l, Inc. v. Advanced Tech. Labs., Inc., 127 F.3d 1462, 1470 (Fed. Cir. 1997); see 35 U.S.C. § 287(a); Nike, Inc. v. Wal-Mart Stores, Inc., 138 F.3d 1437, 1446 (Fed. Cir. 1998) (The statute requires "the affirmative communication of a specific charge of infringement by a specific accused product or device.").

129. 35 U.S.C. § 284.

130. 35 U.S.C. § 285.

131. *See* MedImmune, Inc. v. Genentech, Inc., 127 S.Ct. 764 (2007).

132. *In re* Seagate Tech., LLC, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc).

133. *See* Edward H. Rice, *Avoiding Willful Infringement Exposure: Are Opinion Letters Still Necessary?*, 15 METROPOLITAN CORP. COUNS. 44 (Dec. 2007); Vito J. DeBari, *New 'Objective Recklessness' Test for Willful Infringement*, 238 (65) N.Y.L.J. (Oct. 2, 2007).

134. *See* Christopher J. Rourke, *What to Expect from Your Patent Attorney—and What NOT to Expect!*, METROPOLITAN CORP. COUNS. 9 (June 2003).

135. *See* Katherine J. Strandburg, *What Does the Public Get? Experimental Use and the Patent Bargain*, WIS. L. REV. 1, 6 n.22 (2004).

136. *See* Rourke, *supra* note 134, at 9.

137. AIPLA, AIPLA REPORT OF THE ECONOMIC SURVEY, at I-93 (2007).

138. *Id.*

139. *See* Erin Marie Daly, *Patent Insurance: Pricey, But May Be Worth It*, IP L. 360 (Feb. 6, 2006).

140. Recent developments in patent insurance include policies accommodating online infringement actions and Internet incident policies. *Id.*

141. *Id.*

142. *Id.*

143. *Id.*