Over the past year, the United States patent law has developed significantly. Numerous cases were decided, shaping the future of patent law. This article tracks the development of patent law over the past year by analyzing important court decisions. These decisions affect various aspects of patent law, including the patentability of subject matter, the validity of patents, and the patent procurement process. While the specific impact of each decision varies, the combination of the decisions resulted in noteworthy changes to patent law in the United States.
INTRODUCTION

There have been quite a few developments in patent law over the last year. This article will focus primarily on court decisions that gave rise to those developments, grouped into three categories. The first category deals with the patentability of subject matter, the validity of patents, and things that occur during the patent procurement process. The second category consists of court decisions interpreting patents. Finally, the third category includes decisions dealing with patent enforcement problems.

I. Patentability and Validity

A. Written Description

The first case, LizardTech v. Earth Resource Mapping Inc. is a Federal Circuit decision involving the written description requirement of patent law.\textsuperscript{1} Section 112 of title 35 requires that a patent applicant set forth in detail a written description of the invention sufficient to support the claims.\textsuperscript{2} In this case, the patent involved a method of compressing an image using discrete wavelet transforms ("DWT").\textsuperscript{3} The patent specification emphasized the fact that the DWT process was seamless.\textsuperscript{4} That is, that it did not have lines that would show where images were seamed together.

The prosecution history of the patent also emphasized this seamless discrete wavelet transform; however, the specification only showed one way of achieving that seamless feature – by maintaining updated sums of DWT coefficients in a computer memory.\textsuperscript{5} The problem in this case was that the claim at issue, claim 21, did not mention maintaining updated sums, and merely referred to seamless transformation.\textsuperscript{6}

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\textsuperscript{1} LizardTech, Inc. v. Earth Res. Mapping, Inc., 424 F.3d 1336 (Fed. Cir. 2005).
\textsuperscript{3} LizardTech, 424 F.3d at 1337.
\textsuperscript{4} Id. at 1341–42.
\textsuperscript{5} Id.
\textsuperscript{6} Id. at 1343.
Judge Bryson of the Federal Circuit said that allowing claim 21 to cover all ways of performing DWT-based compression processes that led to a seamless DWT would be problematic, because there was no support for such a broad claim in the specification. Judge Bryson used the analogy of an inventor who creates a particular type of fuel-efficient engine and then describes it in a patent, stating that the inventor in that case would be entitled to cover every type of fuel efficient engine regardless of structure.

This case is somewhat unusual, because it deals with computer software code, which is generally viewed, along with mechanical and electrical cases, as dealing with a “predictable” art — that is, given a specific embodiment, those of ordinary skill in the art would know how to generalize other embodiments based on predictable variations. In the electrical and mechanical areas, the inventor has generally been entitled to claim an invention more broadly than the detailed manner in which it is disclosed in the specification. In that respect, LizardTech is similar to the controversial Gentry Gallery v. Berkline Corp. case from 1998. In that case, the Federal Circuit held a claim invalid because the claim did not mention where the controls on the sofa were, even though the specification stated that the controls were to be on the center console imbedded in the sofa.

There are a few lessons to be learned from this case. First, one should not emphasize features in the specification or prosecution history if they are not necessary for patentability. Second, one should remember to maintain a variety in claim scope. This improves the potential to catch an infringer with a different claim if one of the claims is held invalid.

B. On-Sale Bar

The next issue involves the application of the on-sale bar. Section 102(b) of the Patent Statute says that if a person sells or offers to sell his invention more than one year before filing a patent application, then that person is barred from obtaining patent protection. In Sparton Corp. v. United States, the subject invention was a “sonobuoy,” which is a device that is dropped into the water to detect submarine sounds. In this case, Sparton had offered to sell sonobuoys to the U.S. government more than one year before it filed its patent application. The U.S. Navy uses these devices to monitor foreign submarines. A parachute was attached to the sonobuoy, and when the device hit the water, a release mechanism, or plate, caused the sonobuoy to detach and submerge into the water.

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7 Id. at 1344.
8 Id. at 1346.
9 Id.
11 Id.
13 Sparton Corp. v. United States, 399 F.3d 1321, 1322 (Fed. Cir. 2005).
14 Id. at 1322.
The interesting twist in this case was that the proposal given to the U.S. government described a multi-piece release plate that would detach the parachute.\textsuperscript{15} When Sparton filed its patent application more than one year later, instead of trying to patent a multi-piece release plate, the patent was directed to a slightly different single-piece release plate.\textsuperscript{16} The Federal Circuit held that the on-sale bar did not apply, because the release plate disclosed in the proposal differed from the release plate in the patent.\textsuperscript{17} Therefore, what was offered for sale did not fully anticipate or include all the details of what was later covered by the patent. The court further stated that a patentee cannot offer to sell an invention, for purposes of the on-sale bar, before it has been conceived.\textsuperscript{18} What was conceived in \textit{Sparton}, as far as the patent was concerned, was the single release plate. The court also rejected the argument that something that was offered earlier would be barred if it was later developed.\textsuperscript{19}

This case is particularly interesting, because I was on the losing end of this situation in \textit{Pfaff v. Wells Electronics} in 1997.\textsuperscript{20} In \textit{Pfaff}, the court held that the on-sale bar was not limited solely to what was offered for sale, but also applied if the subject matter of the sale would have been obvious.\textsuperscript{21} In other words, if it would have been an obvious variation, the on-sale bar would apply. In \textit{Sparton}, however, the Court of Federal Claims, the lower court from which the appeal was taken, included an alternative holding in the opinion, stating that even if the invention was not anticipated by the proposal, it would have been rendered obvious by what was offered for sale.\textsuperscript{22} The Federal Circuit did not address that argument on appeal.\textsuperscript{23} This is a very curious outcome and there seems to be some conflict between the on-sale bar cases.

\section*{C. Public Use Bar}

The next case involves the public use bar. Under Section 102 of the Patent Statute, if a person publicly uses his invention more than one year before filing for a patent, that person will be barred from getting a patent.\textsuperscript{24} In \textit{Invitrogen v. Biocrest Manufacturing}, the patent owner, Invitrogen, had a patent claim that covered a process for producing \textit{E. coli} cells.\textsuperscript{25}

More than one year before it filed its patent application, Invitrogen was using the process in its laboratories to grow \textit{E. coli} cells that were then used on other projects.\textsuperscript{26} Importantly, Invitrogen did not publicly use the invention in the sense

\begin{thebibliography}{9}
\bibitem{15} Id.
\bibitem{16} Id.
\bibitem{17} Id. at 1323–24.
\bibitem{18} Id. at 1324.
\bibitem{19} Id. at 1324–25.
\bibitem{20} \textit{Pfaff v. Wells Elecs. Inc.}, 124 F.3d 1429 (Fed. Cir. 1997).
\bibitem{21} Id. at 1436.
\bibitem{22} \textit{Sparton Corp. v. United States}, 57 Fed. Cl. 455, 483 (Fed. Cl. 2003).
\bibitem{23} \textit{Sparton Corp. v. United States}, 399 F.3d 1321 (Fed. Cir. 2005).
\bibitem{25} \textit{Invitrogen Corp. v. Biocrest Mfg. L.P.}, 424 F.3d 1374 (Fed. Cir. 2005).
\bibitem{26} Id. at 1379.
\end{thebibliography}
that the public could come in and see or make use of the process. The use was completely internal. However, *Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co.*, from 1946, is one of the leading cases on this point. That case holds that if the use is secret, but there is commercial exploitation of the invention, then it will be treated as a bar to patentability under the public use bar.\(^{27}\)

In *Invitrogen*, the Federal Circuit distinguished the circumstances in *Metallizing Engineering*. First, the court rejected the totality of the circumstances test that was used in its earlier decision, *Netscape Communications Corp. v. Konrad*.\(^{28}\) The court held that the correct test is the traditional public use test, which asks whether the use was either accessible to the public or if there was a commercially exploited use.\(^{29}\) There was no evidence in this case that the patent owner received any compensation for its internal, secret use. Merely using the invention to develop future products was held not to be commercial exploitation.\(^{30}\) Here, the court really put a crimp in the secret public use doctrine.

**D. Definiteness**

The next case involves the requirement that a patent claim be definite. In this case, *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*,\(^{31}\) the patent owner had filed and obtained a patent on a method that was allegedly infringed by Amazon.com's one-click website check-out process. Amazon.com had obtained a one-click business method patent a number of years ago, the validity of which was previously questioned before the Federal Circuit. However, IPXL had filed an application even earlier than Amazon's.

The problem with IPXL's patent was that one of the dependant claims referred back to an earlier claim. The dependent claim stated “The system of claim 2 . . . wherein . . . the user uses the input means to either change the predicted transaction information or accept the displayed transaction type . . . .”\(^{32}\) The district court found that this claim was indefinite, because it did not reasonably apprise those skilled in the art of its scope.\(^{33}\) The problem cited by the Federal Circuit was that the claim that it depended from was an apparatus claim, but the dependent claim had features of a method claim.\(^{34}\) The Federal Circuit held that the claim was indefinite, because it was unclear whether one would infringe this claim by building a system that was later used in the manner that was recited in this claim, or whether the accused infringer would actually have to use this step that was recited in the dependent claim. Therefore, a practice tip for those who write patent applications is to avoid putting functional or user-specific language into an apparatus claim when possible.

\(^{27}\) Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co., 153 F.2d 516 (2d Cir. 1946).
\(^{28}\) Netscape Commc'ns. Corp. v. Konrad, 295 F.3d 1315 (Fed. Cir. 2002).
\(^{29}\) *Invitrogen*, 424 F.3d at 1380.
\(^{30}\) Id. at 1383.
\(^{32}\) Id. at 1384.
\(^{33}\) Id.
\(^{34}\) Id. at 1384–85.
particularly if the language recites how the apparatus will be used, as opposed to how it intrinsically operates.

E. Anticipation

The next case, SmithKline Beecham Corp. v. Apotex Corp., involves anticipation. A claim is anticipated, and can therefore be declared invalid, if some prior technology discloses all the details of the claim. SmithKline is a 2004 case that was revisited in 2005. In May of 1985, the patent owner had performed clinical tests in the United States to test its formulation for treating depression. In October of 1985, it filed a British application covering the same compound. In October of 1986, more than one year after originally starting U.S. testing, the inventor finally filed a U.S. application, claiming priority back to the British application date.

The problem in this case was that the claim covered the compound itself, and not its use for depression. The question then became whether this was an invalidating public use. In the 2004 opinion, the Federal Circuit said yes, because the use for depression was not claimed. The court even cautioned people not to engage in public, clinical trials without filing a patent application in the United States within one year; however, the court stated if the patentee was claiming the use for depression, the use would not be invalidating. Again, the claim was directed to the compound and the compound was publicly used more than one year before the filing date, which constituted a public use.

The Federal Circuit retracted its opinion after an en banc rehearing vote, and rendered a new opinion in 2005, holding that the patent was still invalid, but that it was invalid because of a prior patent. This was also a controversial decision because the prior patent did not specifically show the compound. The court nevertheless stated that if one would have followed the method of manufacturing this PHT anhydrate in the earlier patent, one would necessarily end up with the claimed chemical compound. Judge Newman wrote a very vexatious dissent, complaining that an unknown feature in a prior patent should not preclude patentability. This remains a controversial decision.

35 SmithKline Beecham Corp. v. Apotex Corp., 365 F.3d 1306 (Fed. Cir. 2004).
36 Id. at 1309.
37 Id.
38 Id. at 1309-10.
39 Id. at 1320. "A patentee should understand that testing the properties, uses, and commercial significance of a compound claimed solely in structural terms may start the clock under [section] 102(b) for filing a claim that is not limited by any property, commercially significant amount, or other use of the compound." Id.
40 Id.
41 SmithKline Beecham Corp. v. Apotex Corp., 403 F.3d 1328, 1329 (Fed. Cir. 2005).
42 Id.
43 Id. at 1330 ("The panel now holds that a product that existed in trace amounts, although unknown and undetected and unisolated, is 'inherently anticipated' and barred from the patent system after it is discovered.").
F. Utility

A trilogy of cases over the past year involved the utility requirement of patent law. Section 101 of the Patent Statute contains a requirement that any patented invention must have utility. It must be useful. In re Fisher dealt with the question of what to do when one has a claim to an expressed sequence tag that is used for identifying nucleic acid sequences for a maize plant. The specification at issue in this case did not provide many details about why one would want to practice this invention, except to note that these sequences could be used to help map the maize genome, duplicate genes, or to detect polymorphisms in maize plants. No one has been able to explain why this is useful or profitable. The Patent Office said that the claimed invention was not useful under the Patent Statute, because it did not have a specific and credible utility. The Federal Circuit agreed that a specific and substantial utility was needed for patentability. Merely isolating molecules out of a plant for which one has not identified any concrete utility is not enough to satisfy this requirement.

Another case dealing with the utility requirement came out of the patent office, Ex parte Lundgren. This case was unusual because it involved a pure business method patent, a method of compensating a manager. There were absolutely no computer or hard technology features recited in the claims of the patent application. It contained steps of choosing a performance standard, measuring performance, comparing performance and then compensating the manager based on the performance. Now before one laughs at the “novelty” involved here, this merely paraphrases the steps. There are, of course, more detailed steps, but the point is that there is no computer and no hard technology involved. It really is only a pure business method with no physical steps involved.

The examiner rejected this application, because it was not in the technological arts. In a highly unusual decision, the Board of Appeals issued a precedential opinion, split three to two, holding that there is no requirement that an invention be in the technological arts. According to the Board, the only test for utility is whether it produces a useful, concrete, and tangible result. That decision flows from State St. Bank & Trust Co. v. Signature Financial Group, a 1998 case. The applicant in Lundgren could then proceed with an examination on the merits.

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42 In re Fisher, 421 F.3d 1365 (Fed. Cir. 2005).
43 Id. at 1368.
44 Id. at 1370.
45 Id. at 1372.
47 Id. at *1.
48 Id. at *1–*3.
49 Id. at *6.
50 Id.
51 Id. at *7.
52 State St. Bank & Trust Co. v. Signature Fin. Group, 149 F.3d 1368 (Fed. Cir. 1998).
The third and final case is *Metabolite Labs., Inc. v. Laboratory Corp. of America*. The odd thing in this case is that the patent claimed a method of detecting vitamin deficiency by measuring levels of amino acid and then correlating those levels with the deficiency. The defendant attacked the validity of the patent for a variety of reasons in the Federal Circuit based on Sections 112, 102, and 103, but never attacked validity on the basis of Section 101, utility.

The Federal Circuit upheld the validity of the patent. In its petition for certiorari to the United States Supreme Court, Lab Corporation of America very cleverly drafted this question — Can a method claim to “correlate” test results be infringed by a doctor thinking about a basic scientific relationship? The Supreme Court asked the U.S. government for its opinion as to whether it should take this case and decide whether the patent is invalid because it covers a law of nature, natural phenomena, or abstract idea. That question was never briefed, argued, or discussed in any of the lower proceedings. However, the Supreme Court appeared to sense that problem, and had the inclination to get involved.

The U.S. government said the Supreme Court should not take the case, because that issue was not briefed below. Nevertheless, the Supreme Court granted certiorari and held arguments. During the arguments, several justices questioned whether they should have taken the case. I think there may be some justices who saw this case as a vehicle to reexamine business method patents generally, and possibly even overrule *State Street Bank v. Signature Financial*. The Supreme Court later dismissed the petition for certiorari as having been improvidently granted.

### G. Experimental Use

*Electromotive Division of General Motors Corp. v. Transportation Systems Division of General Electric Co.* is a case involving the experimental use exception to the public use and on-sale bars. A patent is barred if the patentee sells its invention, or publicly uses its invention more than one year before filing for a patent application. There exists a loophole in that doctrine if one can show that the sale or the public use was experimental. If the patentee can show that it was merely testing its invention, then the patentee is entitled to do that testing without fear of jeopardizing the patent.

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58 *Id.* at 1358.
60 *Id.* § 102.
61 *Id.* § 103.
62 *Id.* § 101.
64 *Id.* at 1368.
In this case, General Electric ("GE") had sold bearings to Union Pacific that were used in locomotives more than one year before the filing date of the patent. The GE patent was challenged on the basis of this public use, or on-sale bar, and GE argued that its use was experimental in nature. The Federal Circuit said that there must be objective evidence of experimentation in order to use the experimental use exception to the on-sale bar. This is a new case on this subject, and really breaks new ground. Judge Michel held that customer awareness is not only among the experimentation factors, but also that it is critical. Therefore, if the customer does not know that the patentee is testing, and there are no control procedures over the test, then the patentee may not rely on the experimental use exception. A patentee planning to rely on this exception should formulate the tests very carefully.

H. Authority of PTO to Request Information

*Star Fruits S.N.C. v. United States* is a case involving the authority of the Patent Office to request information. Patent practitioners may have received requests for information from the Patent Office that were worded very broadly. The Federal Circuit held that the PTO is entitled to ask for information even if it does not directly affect the patentability of the claims.

III. INTERPRETATION OF PATENTS

A. Phillips v. AWH Corp.

Another case that surfaced this past year was *Phillips v. AWH Corp.*, which the Federal Circuit decided in an *en banc* opinion. This case involved a modular structure that can be used for constructing prisons and other secure facilities. Figure six of the patent shows steel baffles, which are internal to the structure, can support the structure, and also can help to deflect bullets, for example.

The issue in this case was the meaning of the term "baffle." In its 2004 panel decision, the Federal Circuit said that a baffle must be oriented at an angle other than ninety degrees, because if it was not so oriented it would not have the bullet-
deflecting properties described in the specification. The claim did not say anything about bullet deflecting or angles, but the court nevertheless found that the angle was required because of the way the specification was worded.

In July 2005, the court vacated its earlier decision and issued a new opinion that essentially has five discrete holdings. First, a patent owner is no longer entitled to the full range of dictionary definitions that are associated with a claim term. The court, in Texas Digital Systems, Inc. v. Telegenix, Inc. from 2002, had said essentially that the patent owner could use the full range of the dictionary definition. If a term, like the word baffle, is used in a claim, under Texas Digital the patent owner could open up a dictionary, find any definition for that term that was advantageous, and then assert that definition in the litigation. The court could then adopt the asserted definition as the meaning for that term. This was a broad scope for patent owners. The first thing the court did in Phillips, was to reject that doctrine.

Second, the Federal Circuit rejected the proposition that a dictionary definition is presumed to be the correct one unless the patent specification dictates otherwise. The result is that not only does one not get the full range of dictionary definitions, but this removes any presumption that something in the dictionary is the correct interpretation.

Third, the Federal Circuit rejected the proposition that the patent specification should only be consulted if the dictionary definition is unclear. It is obvious where things are going here. The court is moving away from the dictionary.

Fourth, the claim terms can still be defined by implication in a specification even if they are not expressly defined. It is acceptable to consider dictionary definitions as long as they do not contradict the extrinsic evidence.

Finally, the court addressed a legal doctrine suggesting that one can interpret claims in such a way as to preserve their validity. The Federal Circuit questioned that doctrine in Phillips, and said that it is of very limited utility.

The bottom line in this case is that, despite certain statements in the specification, the defendant was not able to rely on those to limit the meaning of the claims. The court held that one may not read all the various objects of the invention into all the claims. The end result was that the patent owner won in this case. The parties had otherwise agreed on the meaning of the word “baffle.”

In Cybor Corp. v. FAS Technologies, Inc., from 1998, the Federal Circuit said claim interpretation is subject to de novo review on appeal. The court in Phillips reaffirmed this. That means the Federal Circuit need not pay attention to what the district court did, and instead can start with a fresh slate when it interprets the claims.

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78 Id. at 1213. “From the specification’s explicit descriptions of the invention, we conclude that the baffles must be oriented at angles other than 90 degrees.” Id. “Baffles directed at 90 degrees cannot deflect projectiles as described in the ’798 patent...” Id.
79 Phillips II, 415 F.3d at 1322–23.
80 Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193, 1202 (Fed. Cir. 2002).
81 Phillips II, 415 F.3d at 1316–17.
82 Id. at 1317.
83 Id. at 1318–19.
84 Id. at 1328.
86 Phillips II, 415 F.3d at 1330.
claims. The Federal Circuit did not change the standard in this opinion, although Judge Mayer dissented, because he thought that the standard should have been changed.

**B. Nystrom v. Trex Co.**

*Nystrom v. Trex Co., Inc.* is an example of a case that had a different outcome after *Phillips*. A 2004 panel in this case decided what the word “board” meant in the claim. The invention in *Nystrom* is the artificial decking used for backyard decks. The claim used the word “board,” and the defendant used “boards” made out of plastic, not wood. In 2004, the Federal Circuit stated that one of the dictionary definitions of the word “board” did not limit the meaning of “board” to wood. Therefore, the plaintiff won. The court revisited that holding in 2005, after the *Phillips* decision, and essentially changed its mind. The Federal Circuit did not allow the dictionary definition to control anymore. The specification made clear that “board” is limited to wood.

**IV. ENFORCEMENT OF PATENTS**

**A. Injunctions**

*EBay Inc. v. MercExchange, L.L.C.* dealt with the enforcement of patents. In this case, MercExchange sued eBay for infringing a patent covering its auction website. The jury found the patents to be valid and infringed, and awarded damages. However, the district court refused to issue a permanent injunction, because, first, it was concerned about business method patents, and second, the patent owner in this case was willing to license its patents. Based on those factors the court held an injunction was not necessary.

The Federal Circuit reversed, stating one may not look at business method patents any differently than other patents. The general rule of the Federal Circuit is that a patentee is entitled to a permanent injunction once infringement and validity have been decided. The Supreme Court took the case and recently reversed the Federal Circuit. The Supreme Court held that one must look at the four traditional factors for permanent injunctions, and a court may not presume that a patent owner is entitled to an injunction.

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87 Nystrom v. Trex, 374 F.3d 1105 (Fed. Cir. 2004).
88 Id. at 1111–12.
90 Id.
92 Id. at *3–*4.
93 Id. at *4.
94 Id. at *10–*11.
95 Id. at *9.
B. Extraterritorial Effect of U.S. Patents

A trilogy of cases, starting with *Eolas Technologies v. Microsoft*,® involves the extraterritorial effect of U.S. patents. In these cases the Federal Circuit has essentially expanded the reach of U.S. Patent Law to cover infringing activities overseas. In *Eolas*, the Federal Circuit held that computer code on a “master disk” that was exported constituted a patented “component” of the invention, thus giving rise to liability under U.S. law under 35 U.S.C. § 271(f). In *AT&T Corp. v. Microsoft*, the court further extended this holding to find that exporting a single master disk gave rise to liability for copies made overseas from that master disk, which it viewed as having been “supplied from” the United States.® Judge Rader dissented, concluding that foreign-made copies should not be included for purposes of damages. Finally, in *NTP Inc. v. Research in Motion, Ltd* — the so-called “Blackberry” case — the Federal Circuit upon rehearing clarified its earlier 2004 decision, and held that a method claim cannot be infringed under U.S. law unless all the steps of the method are performed in the United States.® However, it retained its earlier holding that an apparatus that was primarily used within the U.S. borders could infringe a claim directed to the apparatus, even though part of the apparatus was located outside the United States.

CONCLUSION

Over the past year, the United States patent law has developed significantly. Numerous cases were decided, shaping the future of patent law. These cases will have a wide-ranging impact on U.S. Patent Law, and patent owners will be able to make a much more extensive use of U.S. patents to cover overseas behavior.

® *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005).
® *AT&T Corp. v. Microsoft Corp.*, 414 F.3d 1366 (Fed. Cir. 2005).
® *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005).