INTRODUCTION
American intellectual property laws have significantly changed how patent litigation is conducted in the United States. Engineers, businessmen, and businesswomen need to know that patent litigation is not limited to the courtrooms, but in part, is also conducted in the U.S. Patent and Trademark Office (USPTO). Patents in a patent litigation in U.S. District Court can end up before the USPTO and held invalid and never have their day in court. A patent held invalid before an inter partes review in the USPTO is referred to as a zombie patent. Based on the Patent Office administrative patent judges, the inter partes review has been holding patents invalid that previously went to a lay jury.

AMERICA INVENTS ACT
The Leahy-Smith America Invents Act of 2011 (AIA) instituted a procedure under 35 U.S.C. § 311 through 35 U.S.C. § 319, “Inter Partes Review,” for contesting the validity of patents. The effective date of the AIA was September 16, 2012, and it applies to all patents issued before, on, or after that date. The inter partes review is conducted in the USPTO by the Patent Trial and Appeal Board. The inter partes review is a trial before the Patent Trial and Appeal Board and as such, is litigation focused on the patent validity issues on novelty under 35 U.S.C. § 102 and obviousness under 35 U.S.C. § 103.

In comparison, in the U.S. District Court the issues in a trial would not be limited to patent validity, but would include all issues, such as patent infringement and damages. As shown in Figure 1, a jury is used in the U.S. District Court, but a judge is an alternative option. In an inter partes review before the Patent Trial and Appeal Board, there is no jury or judge. Instead, administrative patent judges who are lawyers with technical degrees serve as the judge and finders of fact, as shown in Figure 2. They have technical degrees in electrical engineering, physics, chemistry, and other disciplines in engineering and science. Examiners examine patent applications to determine whether they are worthy to issue as a U.S. patent.

A petitioner institutes an inter partes review by filing a petition with the Patent Trial and Appeal Board. With the petition, the petitioner presents evidence that challenges the validity of the patent at issue. Evidence typically includes prior patents, prior published literature, and publications. The patents, literature, and publications can come from any country. If they are in a foreign language, an English translation is required.
PREPAID WIRELESS CELLULAR TELEPHONE CASE

Prior to the AIA, all patent issues were by trial in U.S. District Court. By way of example, in Boston, MA, 2005, Freedom Wireless went to trial against Boston Communications Group for infringing two patents on prepaid wireless cellular telephones. Infringement is “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefore, infringes the patent.” 35 U.S.C. § 271.

The trial lasted five months. They tried the case before a non-technical jury, which held both patents valid and infringed. The jury award was approximately $128 million. A year later, attorney fees were awarded for approximately $35 million. The AIA did not exist back then, but came seven years later. So the jury decision was final, subject to an optional appeal to the Court of Appeals for the Federal Circuit. The case was not appealed. Had the AIA existed, an inter partes review might have had a different result.

TIMING

In an inter partes review, or U.S. District Court, expert witnesses can supply opinions by the way of affidavits. Depositions can be taken of the expert witnesses furnishing an opinion. Thus, not only is there discovery between parties, but there also can be a hearing before a three judge panel.

Timing becomes very important from the day the petitioner files the petition. Within six months the Patent Trial and Appeal Board must institute the inter partes review and trial, and conduct the trial within 12 months, but it can take 18 months in exceptional circumstances. Thus, the Patent Trial and Appeal Board can have the case for up to two years. A decision from the Patent Trial and Appeal Board can be appealed to the Court of Appeals for the Federal Circuit, which can take another two years.

The inter partes review can be conducted on its own, without a patent lawsuit concurrently filed in a U.S. District Court. But what happens if a patent lawsuit is filed in a U.S. District Court on the same patent pending in an inter partes review? Assume, in the patent lawsuit that the patent holder is the plaintiff and that the business making the product is the defendant. The plaintiff sues the defendant for patent infringement. The business making the product (the defendant) can still institute, as a petitioner, an inter partes review of the patent in the Patent Trial and Appeal Board. The defendant then would approach the judge in the patent lawsuit in the U.S. District Court to stay the litigation until the outcome of the inter partes review is final. The U.S. District Court judge has a lot of latitude and most likely would grant the stay. After all, if the matter in the inter partes review holds the patent invalid and the plaintiff does not appeal or loses on appeal, then the contest between the plaintiff and defendant in the U.S. District Court ends.

Thus, possible outcomes from the Patent Trial and Appeal Board are that the patent or patents are valid or are invalid. Another possibility is that the plaintiff and defendant settle their case.
Assuming the patent in issue is valid at the Patent Trial and Appeal Board, then the case, if not settled, goes to trial in the U.S. District Court.

**PRESUMPTION OF VALIDITY**

Let us briefly review the process for obtaining a U.S. patent. When an inventor applies for a patent, the inventor submits to the USPTO a patent application, typically drafted by a patent attorney. The patent application discloses the overall invention with claims defining the specifics of the invention. An examiner reviews the patent application for patentability, among other requirements, to determine whether it is worthy to issue a U.S. patent. Typically the examiners hold B.S., M.S., or even Ph.D. degrees in their field of technical expertise. The examiner often challenges in an office action the patentability of the claims of the invention disclosed in the patent application by citing prior art, i.e. references, relevant to the patent application. An examiner reviews the patent application for patentability, among other requirements, to determine whether it is worthy to issue a U.S. patent. Typically the examiners hold B.S., M.S., or even Ph.D. degrees in their field of technical expertise.

An issued patent from the USPTO is presumed to be valid. The presumption of validity is what the petitioner in the inter partes review is attempting to overcome in the Patent Trial and Appeal Board. The petitioner usually challenges with newly found prior art and references that were not considered by the original examiner. What does this have to do with zombie patents, you might ask? Patents that were issued with the presumption of validity and fail in an inter partes review are the walking dead among patents, the zombie patents.

**5G CELLULAR TELEPHONE CASE**

Let’s look at several situations where zombie patents might appear and the impact they may have on the litigation in a U.S. District Court. The first situation involves two large multi-million dollar corporations, one a plaintiff and the other a defendant, both manufacturing products in the 5G telecommunications field.

In the first situation, both corporations have a budget for patent litigation. The hypothetical patents cover 5G cellular telephones. Thus, they are fighting over market share. A lawsuit is filed in a U.S. District Court by the first multimillion dollar corporation, the plaintiff. The second multimillion dollar corporation, the defendant, responds to the lawsuit denying infringement and asserting that the patent is invalid. The second multi-million dollar corporation, as a petitioner, files a petition in the Patent Trial and Appeal Board with a Significant New Question (SNQ) attacking the validity of the plaintiff’s patent. The patent holder files a response to the petition. The patent and responses are reviewed and if the administrative patent judge at the inter partes review finds the petition valid, then the patent is held invalid, a zombie patent. If, however, the patent holder wins at the inter partes review, then the patent lawsuit may proceed. The petitioner, however, can file a new SNQ, stopping the litigation and the process is repeated. The petitioner can repeat the process ad infinitum!

The defendant (petitioner) petitions the judge in the U.S. District Court to stay the litigation, pending outcome of the inter partes review before the Patent Trial and Appeal Board. The plaintiff files a response. An estimated cost of the inter partes review may be a lot less than a full-fledged trial in U.S. District Court. If the defendant (petitioner) wins the inter partes review, then he exposes the plaintiff’s patents among the walking dead—zombie patents. This assumes the plaintiff loses upon appeal or does not appeal. The savings in terms of litigation fees may be less for the inter partes review than the litigation in the U.S. District Court.
If the defendant does not win the inter partes review and if both corporations have patents in the same technology in the 5G telecommunications field, then they may go to trial or settle the case by cross licensing their patents.

The second situation involves a multi-million dollar corporation (defendant) manufacturing a product in the 5G telecommunications field. The defendant is being sued by one, or two, or more inventors using a corporation, as in Linex Technologies v. Hewlett Packard, Apple, et al. Linex Technologies has a robust patent portfolio in the 5G telecommunications field. The Linex Technologies is represented by a law firm on a contingency fee basis.

In the second case, the defendants, Hewlett Packard, Apple, et al., have a budget for responding to patent infringement claims against them. Linex Technologies has a limited budget for litigation. So, either the contingency fee law firm advances the necessary out of pocket fees, or Linex Technologies, through its shareholders, advances the necessary out of pocket fees, to pursue the inter partes review in the USPTO and litigation in the U.S. District Court. Their lawsuit does not concern market share, but generating revenue from patent infringement. Linex Technologies loses at the inter partes review and did not go to the Court of Appeals for the Federal Circuit. Their patents in suit ended up as zombie patents.

Consider VirnetX, a publicly traded company with a robust patent portfolio in security software and technology. Since it is publicly traded, it has resources for conducting patent litigation. Revenue is generated from licensing its patents. VirnetX sued Apple for patent infringement.

There were multiple lawsuits between Apple and VirnetX. Apple also challenged VirnetX’s patents in an inter partes review. VirnetX survived the inter partes review with its patents and won patent litigations against Apple. In the end, Apple paid VirnetX $502.8 million in 2021. The VirnetX case shows that inter partes review does not necessarily make zombies of patents brought before it. Not all patents end up as zombie patents.

CONCLUSION

When a patent case goes to trial in a U.S. District Court, a lay jury not experienced in applying patent law and reviewing technical evidence will be deciding the outcome of the case. The Patent Trial and Appeal Board, on the other hand, has administrative patent judges who have technical expertise in patent law and are experienced in applying patent law with respect to technical evidence in the case. These professionals are more likely to “get it correct” in their decision on the validity issue, than the lay jury. At least 28 administrative patent judges serve on the Patent Trial and Appeal Board. Over 2,000 zombie patents have been declared completely or partially invalid, thus, it is very risky to bring zombie patents before the Patent Trial and Appeal Board, and redeeming for valid patents.

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