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A review of developments in Intellectual Property Law

Amending Claims Before the PTAB: What Have We Learned From the Board?

By Andrew W. Williams, Ph.D.



When Congress enacted the America Invents Acts in 2011, they created three new mechanisms to challenge issued claims at the Patent Office – Covered Business Method patent review, Post-Grant Review, and *Inter Partes* Review (“IPR”). Congress was responding, in part, to the public outcry over too many overly broad issued claims, coupled with the fact that challenging their validity in federal court was too difficult, costly, and time-consuming. Congress therefore designed these proceedings before the newly formed Patent Trial and Appeal Board (“PTAB,” or “Board”) to be resolved expeditiously. Moreover, petitioners were provided many advantages over similar actions in district courts, such as a lower evidentiary standard.¹ Perhaps in an attempt to even the playing field, Congress also statutorily provided patent owners with a chance to amend their claims – a benefit not available in

federal court. In practice, however, this ability has proven all but illusory. As of the end of 2014, only two sets of motions to substitute claims have been granted (at least in part); one of these being unopposed and with the patent owner being the United States of America. As a result, patent owners without such a home-court advantage have been asking: “just what does it take to amend claims before the PTAB?”

In an apparent response to this sense of frustration, the PTAB has been issuing instructions and guidance about amending claims almost since its inception. One of the earliest examples can be found in one of the first filed IPRs, *Idle Free Systems, Inc. v. Bergstrom, Inc.*² In that case, the Board provided the first set of comprehensive guidance on motions to amend that is still cited as authoritative today.³ Perhaps in view of the dearth of granted amendment motions, the PTAB reiterated this guidance the subsequent year in a message on the AIA Blog – “How to Make Successful Claim Amendments in an AIA Trial Proceedings.”⁴ Nevertheless, either

practitioners were not paying attention to this guidance, or more likely, amending claims was not as easy as the PTAB had suggested it would be. As a follow-up, the Board released an order entitled “On Motion to Amend Claims” on October 30, 2014, in *Corning Optical Communications RF, LLC v. PPC Broadband, Inc.*⁵ Of course, the cases in which the Board has granted motions to substitute claims are probably the most instructive. This article highlights some of the takeaway lessons from the Board’s decisions and guidance with regard to three of the most important issues: the content of the substitute claim set, the burden of proof, and the requirement of the patent holder to establish patentability of the substitute claims.

The Substitute Claim Set

The PTAB regulations require that the substitute claim set appear as a claim listing and be responsive to a ground of unpatentability.⁶ Moreover, there is

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Proving Inherent Anticipation—Make or Break Your Case With Expert Testimony

By James C. Gumina

Anticipation is a basic concept in patent law. On its face the concept is simple—if a single prior art reference teaches every element of a claim in the proper context, then the claim is not patentable, i.e., it is anticipated by the prior art reference. Anticipation is easy enough to establish if the prior art expressly sets forth each of the elements of the claims. However, more interesting issues of proof arise when one or more elements of the claims are not expressly stated in the prior art, but following the prior art necessarily yields the missing elements of the claim.

The courts developed the concept of inherent anticipation to deal with the situation where an issued patent covers subject matter that already exists in the prior art but is not expressly taught or even appreciated.¹ Simply stated, inherent anticipation exists where although a limitation of a claim is not expressly taught in the prior art reference, the claim limitation necessarily and inevitably will be present when the teaching of the prior art is practiced. The idea being that if the subject matter already exists in the prior art, then it is not patentable. Interestingly, however, there does not have to be any conception of the invention in the prior art for there to be inherent anticipation. Specifically, it is not necessary that anyone previously understood the existence of the inherent subject matter.² The courts often express this by saying that a newly discovered feature of a known invention is not patentable. In other words, if the feature is always present when practicing the prior art, whether appreciated or not, a patent cannot later be granted on an invention directed to the feature once it is discovered. One example of this can be found in the *In re Cruciferous Sprouts*³ case. In that case the inventors had discovered that eating certain cruciferous sprouts high in glucosinolates had significant health benefits. It was undisputed that the benefits of eating these plants was not previously understood or appreciated. Yet it was also clear from the record that the prior art taught eating the same sprouts later discovered to be high in glucosinolates. Thus, the court concluded that when following the prior art

teaching to eat these sprouts, the eater would inherently experience the claimed benefit; thus the claims are inherently anticipated and not patentable.

To inherently anticipate, the prior art does not need to expressly teach each claim limitation, but it must enable one skilled in the art to practice the claimed invention, including the inherent limitations. The case law addresses the enablement issue by requiring that the inherent limitation must

Often the best way to establish inherency is to have your expert replicate the prior art and test the results to demonstrate the presence of the missing claim element. This can, however, be a risky proposition.

be the necessary and inevitable result of practicing the teaching of the prior art.⁴ It is often quite difficult to establish that a claim limitation necessarily and inevitably exists in a prior art reference. The limitation must always be present when practicing the art. Inherent anticipation cannot be established by mere possibilities. It is not sufficient that sometimes the inherent feature results; it must always be there.

Discussed herein is how the courts have viewed expert witness testimony with respect to proving inherent anticipation and what pitfalls parties have encountered in efforts to use experts to establish or refute inherency.

The first issue is to determine whether to use an expert witness to help establish inherency. The answer should almost always be yes. When defenses of inherent anticipation have been successful, the courts

have inevitably relied on expert testimony to resolve whether a claimed characteristic is inherent in the prior art. Indeed, when an argument of inherency has been put forth without the benefit of expert testimony, the courts have often found the evidence to be inadequate.⁵ While there may be fact situations that would allow inherency to be established without the benefit of expert testimony, those circumstances will likely be relatively rare.

Expert testimony should be focused on directly establishing that the missing claim element is inherent in the prior art. Specifically, the testimony must establish by clear and convincing evidence that the claimed characteristic is always present when practicing the teaching of the prior art reference.⁶ When an expert's analysis is not directed specifically to the claimed limitation, the court may find that the burden of establishing inherency has not been carried.⁷

Often the best way to establish inherency is to have your expert replicate the prior art and test the results to demonstrate the presence of the missing claim element. This can, however, be a risky proposition. Inherency requires that the missing claim element be present every time the prior art teaching is practiced. Therefore, an unsuccessful or poorly run test could damage your ability to make the inherency argument. However, the failure to do appropriate testing can also weaken your case. An expert may be vulnerable to criticism if he had the ability to run tests to support his position but chose not to. An expert must have facts on which to base his opinion; simply reciting a party's contentions in an expert report will generally not suffice.⁸ One of the best places to get these facts is from testing. Of course there are potentially other sources, such as published articles in the relevant field, but very little is as relevant as replicating the prior art relied upon for anticipation.

Of course replicating the prior art is not always as easy as it may seem. Often the prior art omits details that the expert must fill in with his experience. For example, the prior art may teach a process but not specify certain process conditions, such as temperature, residence time, reaction equipment, or the like.

In such a case, these omissions may require testing of multiple variables to fully establish inherency. Very often, choices must be made when attempting to replicate the prior art. This requires that the expert be involved in the planning of any experimentation, and the potential issues should be fully evaluated before the testing begins. If choices are made to limit the testing to a particular variation, then there must be a defensible justification for any choices made in this regard. Failure to be faithful to the prior art in the replication effort can destroy your expert's credibility and render his testimony of no value to the court.⁹

It is also important to make sure the expert's testimony is fully supported by the evidence.¹⁰ If the expert stretches her testimony (i.e., is perceived as an advocate rather than simply as an expert) again it can destroy her credibility and reduce the chances of establishing inherency through her testimony. In other words, do not allow an expert to overreach. If the argument requires your expert to overreach, then there is an issue with the argument or the support for it. Those issues should be addressed well before the preparation of the expert report.¹¹

Just as important as your expert testimony is the testimony of the opposing party's expert. Generally when it comes to basic scientific principles, experts have a hard time disagreeing with each other. Few things are more convincing to the court than testimony of an opposing expert that supports your position. Therefore it is important to understand the positions that opposing experts are taking, the basis for their positions, and how to challenge those positions at deposition in advance of trial. The courts have considered agreement among the experts convincing with respect to inherency¹². It can be very powerful evidence.

The defense of inherent anticipation carries with it a high standard of proof to reach the level of clear and convincing evidence.¹³ Expert witness testimony is most often critical in determining whether this standard has been met. As can be seen from the courts' treatment of expert testimony on this issue, it is important that the expert's testimony be well thought out, consistent, and cognizant of the challenges to that testimony. Not every case is appropriate for an inherent anticipation argument. But when the facts support such an argument, properly prepared expert testimony is often a key factor in a successful outcome.

Endnotes

- 1 See *Mehl/Biophile Int'l Corp. v. Milgram*, 192 F.3d 1362, 1365 (Fed. Cir. 1999) ("a prior art reference may anticipate when the claim limitation or limitations not expressly found in that reference are nonetheless inherent in it").
- 2 See *Schering Corp. v. Geneva Pharms.*, 339 F.3d 1373, 1378 (Fed. Cir. 2003) ("this court's precedent does not require a skilled artisan to recognize the inherent characteristic in the prior art that anticipates the claimed invention").
- 3 *In re Cruciferous Sprouts*, 301 F.3d 1343 (Fed. Cir. 2002).
- 4 See, e.g., *Leggett & Platt, Inc. v. Vutek, Inc.*, 537 F.3d 1349, 1354 (Fed. Cir. 2008) ("Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claims limitations, it anticipates."); *Rexnord Indus., LLC v. Kappos*, 705 F.3d 1347, 1355 (Fed. Cir. 2013) ("anticipation by inherent disclosure is appropriate only when the reference discloses prior art that must necessarily include the unstated limitation.");
- 5 See *TV Interactive Data Corp. v. Sony Corp.*, No. C 10-0475 PJH, 2012 WL 6020113 (N.D. Cal. Dec. 3, 2012). Defendant, Sony, moved for summary judgment arguing inherent anticipation based on a published Japanese patent application. The application did not expressly teach one claim limitation, but Sony argued it was inherent in the UNIX operating system utilized in the application. Sony apparently supported its argument with claim charts but no expert testimony. The Court held that Sony had not carried its burden as the claim charts were not evidence and without expert testimony the material cited by Sony was "incomprehensible to the court." *Id.* at *22. But see *Centricut, LLC v. Esab Group, Inc.*, 390 F.3d 1361, 1369 (Fed. Cir. 2004) (expert testimony not required when the technology is easily understood).
- 6 See *Haberman v. Gerber Prods. Co.*, 236 Fed. Appx. 592 (Fed. Cir. 2007). The Federal Circuit reversed a finding of inherent anticipation on a patent directed to the valve in a sippy cup, noting that no evidence was introduced as to the claimed quantum of pressure necessary to operate the prior art valve. The Federal Circuit concluded that at most the evidence established that applying some amount of suction "may" result in drawing liquid through the prior art valve. The court found this evidence insufficient to meet the clear and convincing standard that the prior art necessarily functions in a manner within the scope of the claim. *Id.*
- 7 *In Atofina v. Great Lakes Chemical Corp.*, 441 F.3d 991 (Fed. Cir. 2006), the Federal Circuit reversed a finding of anticipation based in part on inherency. The claims at issue were directed to a method for making difluoromethane. One of the limitations of the claim required a contact time with a catalyst of between 0.01 and 10 seconds. The prior art was silent with respect to contact time. The court concluded that Defendants' evidence was insufficient to establish that the contact times were inherent. Specifically the defendants had presented evidence about the size of the reaction tube and the flow rates through the tubes (presumably in an effort to demonstrate how long the reactants were present in the reaction tube). The court, however, concluded that this evidence "do[es] not say anything about any contact times." *Id.* at 1000. The court then concluded that the evidence was insufficient to establish that the missing limitation must necessarily be present in the teaching of the prior art.
- 8 See *Warner Chilcot Labs. Ireland Ltd. v. Impax Labs., Inc.*, Nos. 2:08-cv-06304 (WJM), 2:09-cv-02073 (WJM), 2:09-cv-01233 (WJM), 2012 WL 1551709 (D.N.J.). Defendants ran no experiments to support their position and cited to no scientific papers that supported the position. The only evidence that Defendants relied upon was the testimony of an expert, which the court gave no weight, characterizing it as "merely a recitation of Defendants' theory" and unsupported by any extrinsic evidence. *Id.* at *47.
- 9 See, e.g., *Pfizer, Inc. v. Teva Pharms.*, 882 F. Supp. 2d 643 (D. Del. 2012). The Plaintiff's expert and the Court read the prior art process to require the use of anhydrous ammonia (lacking water). The Defendant's expert had used ammonia that included water in his replication, thus the Court discounted the evidence. *Id.* at 679. See also *Valeant Int'l (Barbados) v. Watson Pharms., Inc.*, No. 10-20526-CIV, 2011 WL 6792653 (S.D. Fla.) (because the expert did not follow the explicit disclosure of the art, "his experiment is simply not probative of the issue of inherent anticipation").
- 10 See *Bettcher Indus., Inc. v. Bunzl USA, Inc.*, 661 F.3d 629, 640 (Fed. Cir. 2011) (finding that defendant was attempting to "characterize one structure (chamfers) as a completely different structure (a bearing race) based on a hypothetical configuration of surrounding structures disclosed nowhere in the prior art (expressly or inherently) and suggested by nothing in the record."); see also *Harris Corp. v. Fed. Express Corp.*, No. 6:07-CV-1819-ORL-28KRS, 2010 WL 2639564 (M.D. Fla.) (holding that the inherency argument failed because it was "not supported by a single prior art reference and extrinsic evidence explaining inherent features").
- 11 An expert should be given all the relevant information when developing his testimony on inherency. Failure to provide the expert with the information could render his testimony of little value. See *In re Omeprazole Litigation*, 483 F.3d 1364 (Fed. Cir. 2007), where the finding of inherency rested in part upon an admission about the nature of the prior art that plaintiff made during a related Korean litigation. Plaintiff's expert testimony was discounted because he was not provided with the testing done in conjunction with the Korean litigation. *Id.* at 1372.
- 12 See *SRAM Corp. v. AD-II Eng'g, Inc.*, 367 Fed. Appx. 150 (Fed. Cir. 2010). The Federal Circuit found there was no factual dispute with respect to the presence of the inherent feature (compensation for lost motion) in the prior art as both parties' expert testified as to its presence in the art. Particularly important was the "admission" from Plaintiff's expert that the while prior art "may have compensated for cumulative lost motion, they did so in a clumsy and imprecise way."; see also *Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312 (Fed. Cir. 2009) (finding that Plaintiff's experts' testimony supported a finding of inherent anticipation).
- 13 See *Par Pharm., Inc. v. TWI Pharms., Inc.*, No. 2014-1391, 2014 WL 6782649 at *5-8 (Fed. Cir. Dec. 3, 2014) (Recent Federal Circuit discussion of the proofs necessary to establish inherency).

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a presumption that for every claim at issue, only one substitute claim is reasonable.⁷ This does not mean, however, that a patent owner can simply maintain the same total number of claims. Instead, each substitute claim must be traceable back to an original patent claim.⁸ In addition, the patent owner should not eliminate any feature or element from the claims.⁹ If the patent owner believes that more than one substitute claim is required for one or more particular claims, it needs to justify this request with an articulable “special circumstance.”¹⁰ Finally, not surprisingly, the substitute claim set must identify what the changes are to the original claims, ideally with the use of brackets for deletions and underlining for additions.¹¹

In *Idle Free*, the PTAB warned against adding additional features to dependent claims without incorporating them into the claims from which they depend. For example, regarding challenged claims 1-3, it was perfectly acceptable to propose a substitute claim 4 for independent claim 1, and substitute claims 5 and 6 for dependent claims 2 and 3, “where claims 5 and 6 each read the same as claims 2 and 3, respectively, except for the difference in claim dependency.”¹² However, “if the patent owner also proposes to add further features into proposed substitute claims 5 and 6,” a special circumstance for making such an addition needs to be established.¹³ This was demonstrated in practice in the *Riverbed Tech.* cases.¹⁴ Even though the Board granted in part the patent owner’s motion to substitute claims, it still found that the patent owner had run afoul of the “reasonable number” requirement because it sought to add additional new features to the dependent claims. The Board explained that to make such additional amendments, the patent owner need not only establish patentability over the prior art, but must also demonstrate a “patentable distinction over parent proposed substitute claims.”¹⁵ This amounts to requiring a demonstration as to why the dependent claims would be patentable over the prior art **and** the parent (independent) claims. And, unfortunately for the patent owner in *Riverbed Tech.*, the Board concluded that it had not sufficiently explained why the additional limitation, in this case storing an additional copy of data, would have been non-obvious in view of the parent claims that also included the storing of a copy of data.¹⁶

Burden of Proof

The regulations also provide that the patent owner, as the moving party, bears the burden of proof in establishing it is entitled to amended claims.¹⁷ Therefore, unlike almost any other proceeding at the patent office, it is the patent owner that must demonstrate why the claims are patentable. The Board’s justification for this burden shift was that when such a motion is granted, the claim set is added to an issued patent without examination.

It is also important to note that the patent owner bears the burden of establishing that

It remains to be seen whether the sentiment of apparent futility in seeking substitute claims will be reversed by the recent successes and guidance from the Board.

the claims meet every ground of patentability. This is true even though IPRs can only be instituted based on citation to patents and printed publications. Therefore, for example, the Board in the *Ariosa Diagnostics v. Isis Innovation Ltd.* Final Written Decision, denied a motion to amend claims because the patent owner failed to show patentability under 35 U.S.C. § 101.¹⁸ As the Board stated in that case, “when considering a motion to amend, we do not *examine* and *allow* or *reject* the substitute claims, but determine whether the patent owner has met its burden of establishing that it is entitled to the substitute claims that it seeks in its motion to amend.”¹⁹ In that case, however, the patent owner was on notice because the original claims had already been found by a district court to have failed the eligibility requirements of § 101.

Patentability

Notwithstanding the outcome in the *Ariosa* Final Written Decision, the Board has advised that it is the main requirement of the patent owner to show the patentability of substitute claims over the prior art. Unfortunately, this demonstration is not limited to the references cited by the petitioner, but instead must account for all prior

art. For example, for any new feature found in the substitute claims, “it should be revealed whether the feature was previously known anywhere, in whatever setting, and whether or not the feature was known in combination with any of the other elements in the claim.”²⁰ Luckily, the patent owner is not expected to be aware of everything known to a hypothetical person ordinary skill in the art, but the patent owner should reveal what it does know, and how it might be relevant. The patent owner should also explain the level of skill in the art, ideally as it relates to the newly added claim limitation. It is also useful to include any textbooks or conventional practices related to the added feature. And, as we have seen in repeated examples, conclusory statements of patentability are not useful.

With regard to patentability, the motions that were granted by the Board are the most instructive. In *Riverbed Tech.*, the patent owner apparently met its burden by providing a “story” of what the prior art taught, citing to both art of record and otherwise, and explaining why its proposed substitute claims described “a very different approach.”²¹ Therefore, instead of the “inflexible approach” of searching data segments used before the present invention, the patent owner explained why the claimed method was a “solution” for the “problems” with the prior art methods.²² The Board deemed this “problem” and “solution” approach to be persuasive.²³ In *International Flavors & Fragrances Inc. v. The United States of America*, the claim amendment sought to limit the broadest independent claim to a specific Markush group of five chemical analogs, all of which could be located in the dependent claims.²⁴ And, even though Board believed that the patent owner’s statement regarding the prior art was conclusory, the explanation of what would have been understood by one of ordinary skill in the art carried the day (with the possible help of an expert declaration and citation to several publications).²⁵ Specifically, the patent owner cited to several references demonstrating that minor structural changes to the relevant compounds can result in very different properties, especially with regard to repelling insects (as required by these claims).²⁶ And, because there was not a “small or easily traversed” number of molecules disclosed in the prior art references, the patent owner satisfactorily demonstrated the patentability of the substitute claim set.²⁷

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Supreme Court Holds that Trademark Tacking Should be Decided by a Jury in *Hana Financial, Inc. v. Hana Bank*

By Sydney R. Kokjohn

In a 9-0 decision authored by Justice Sotomayor, the Supreme Court held on January 21, 2015 that trademark tacking is a question of fact, which should be decided by a jury.¹ The case, *Hana Financial, Inc. v. Hana Bank*, sought to resolve the circuit split regarding this issue of whether a judge or a jury should decide the issue of trademark tacking. Most circuits, including the Ninth Circuit from which *Hana* was appealed, evaluate trademark tacking as a question of fact to be decided by a jury.² However, the Federal and Sixth Circuits evaluate tacking as a question of law.³

As discussed in an earlier Snippets article,⁴ trademark rights are based on use; a party to first use a mark is said to have “priority” and may sue later users for trademark infringement.⁵ The doctrine of trademark tacking allows a party to claim an earlier priority date in narrow circumstances where two marks are “legal equivalents,” meaning that they “create the same, continuing commercial impression” such that consumers “consider both as the same mark.”⁶

In holding that trademark tacking is an issue for the jury to decide, the Supreme Court noted that “[a]pplication of a test that relies upon an ordinary consumer’s understanding of the impression that a mark conveys falls comfortably within the ken of a jury.”⁷ However, the Court clarified that this decision does not mean “that a judge may never determine whether two marks may be tacked” noting that “[i]f the facts warrant it, a judge may decide

a tacking question on a motion for summary judgment or for judgment as a matter of law” and “if the parties have opted to try their case before a judge, the judge may of course decide a tacking question in his or her factfinding

As the Supreme Court decided this decision narrowly, i.e., applied its holding specifically to trademark tacking and to no other area of trademark law, its decision is unlikely to have much of an impact on trademark litigation practice as a whole, as tacking is but a small area of trademark law.

capacity.”⁸ Thus, the Court narrowly held that “when a jury trial has been requested and when the facts do not warrant entry of summary judgment or judgment as a matter of law, the question whether tacking is warranted must be decided by a jury.”⁹

As the Supreme Court decided this decision narrowly, i.e., applied its holding specifically to trademark tacking and to no other area of trademark law, its decision is unlikely to have much of an impact on trademark litigation practice as a whole, as tacking is but a small area of trademark law. Moreover, tacking was already decided by a jury in most circuits.¹⁰ However, trademark owners should be careful when modernizing the appearance of their trademarks in order to make sure that they maintain and protect the traditional elements and commercial impression of their existing marks so that any jury, should the marks be litigated, will have no difficulty in finding them to be legal equivalents.

Endnotes

- ¹ *Hana Fin., Inc. v. Hana Bank*, 135 S. Ct. 907, 913 (2015).
- ² *Id.* at 910.
- ³ See *Van Dyne-Crotty, Inc. v. Wear-Guard Corp.*, 926 F.2d 1156, 1159 (Fed. Cir. 1991); *Data Concepts, Inc. v. Digital Consulting, Inc.*, 150 F.3d 620, 623 (6th Cir. 1998).
- ⁴ Sydney R. Kokjohn, *Trademark Cases Pending Before the U.S. Supreme Court*, Snippets, Fall 2014, at 12, 12-13, available at <http://www.mbhb.com/snippets/>.
- ⁵ See *Hana Fin., Inc. v. Hana Bank*, 735 F.3d 1158, 1163-64 (9th Cir. 2013).
- ⁶ *Van Dyne-Crotty, Inc.*, 926 F.2d at 1159.
- ⁷ *Hana Fin., Inc.*, 135 S. Ct. at 911.
- ⁸ *Id.* (citations omitted).
- ⁹ *Id.*
- ¹⁰ See *id.* at 910.

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It remains to be seen whether the sentiment of apparent futility in seeking substitute claims will be reversed by the recent successes and guidance from the Board. This of course will depend on whether practitioners learn from past mistakes, and whether they will heed the guidance that the Board has been providing for some time now.

Endnotes

- ¹ See, e.g., 35 U.S.C. § 316(e) (“In an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.”).
- ² No. IPR2012-00027, Paper 26 (P.T.A.B. June 11, 2013).

- ³ See *id.*
- ⁴ USPTO Message From PTAB: How to Make Successful Claim Amendments in an AIA Trial Proceeding, AIA Blog (May 5, 2014, 3:57 PM), http://www.uspto.gov/blog/aia/entry/uspto_ptab_message_how_to.
- ⁵ No. IPR2014-00441, Paper 19 (P.T.A.B. Oct. 30, 2014).
- ⁶ See 37 C.F.R. §§ 42.221(a)(2)(i) and (b).
- ⁷ See *id.* at § 422.221(a)(3).
- ⁸ See *Corning Optical*, No. IPR2014-00441, Paper 19 at 3.
- ⁹ See *id.*
- ¹⁰ *Id.*
- ¹¹ *Id.*
- ¹² *Idle Free*, No. IPR2012-00027, Paper 26 at 9.
- ¹³ *Id.*
- ¹⁴ See *Riverbed Tech., LLC v. Silver Peak Sys., Inc.*, No. IPR2013-00402, Paper 35 (P.T.A.B. Dec. 30, 2014); *Riverbed Tech., LLC v. Silver Peak Sys., Inc.*, No. IPR2013-00403, Paper 33 (P.T.A.B. Dec. 30, 2014).
- ¹⁵ *Riverbed Tech.*, No. IPR2013-0042, Paper 35 at 29.
- ¹⁶ *Id.* at 30; see also *Riverbed Tech.*, No. IPR2013-0043, Paper 33 at 30.
- ¹⁷ See 37 C.F.R. § 42.20(c).
- ¹⁸ No. IPR2012-00022, Paper 166 (P.T.A.B. Sept. 2, 2014).
- ¹⁹ *Id.* at 51 (emphasis in original).
- ²⁰ *Corning Optical*, No. IPR2014-00441, Paper 19 at 4 (P.T.A.B. Oct. 30, 2014).
- ²¹ See, e.g., *Riverbed Tech.*, No. IPR2013-0042, Paper 35 at 19.
- ²² See, e.g., *id.*

- ²³ See, e.g., *id.*
- ²⁴ No. IPR2013-00124, Paper 12 at 7 (P.T.A.B. May 20, 2014).
- ²⁵ *Id.* at 12.
- ²⁶ *Id.* at 12-14.
- ²⁷ *Id.* at 15 (quoting *Bayer Schering Pharma A.G. v. Barr Labs., Inc.*, 575 F.3d 1341, 1347 (Fed. Cir. 2009)).

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Post-*Alice* District Court Decisions Regarding the Patent Eligibility of Computer-Implemented Inventions

By Daniel L. Organ

It has been about 9 months since *Alice Corp. v. CLS Bank International* was decided by the Supreme Court.¹ In that time, many district court and Federal Circuit cases have resulted in grants of summary judgment or dismissal based on findings of patent invalidity. Specifically, courts have found the patents at issue to be directed to patent-ineligible subject matter based on the two part framework laid out in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*,² as reiterated and refined in *Alice*.

Under this framework, one distinguishes claims that incorporate laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts:

First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, we then ask, [w]hat else is there in the claims before us? To answer that question, we consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application. We have described step two of this analysis as a search for an inventive concept — i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.³

Using this framework, the Court held that the patents in *Alice* were not patent eligible under 35 U.S.C. § 101.⁴ The claims were drawn to the financial concept of intermediated settlement, which was deemed an abstract idea by the Court.⁵ Analyzing the claims under the second prong, the Court found no inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application, despite explicit recitation of computer devices in the claims. In part, the Court stated that “the mere recitation of a generic computer cannot

transform a patent-ineligible abstract idea into a patent-eligible invention.”⁶

But *Alice* has produced more questions than answers regarding patent eligibility. First, in the realm of claims performed by a computer, what exactly does the Court consider to be patent-eligible subject matter? Second, what steps can a practitioner take when drafting an application to prevail under the two prong *Alice* framework, or to avoid getting caught up in a § 101 challenge at all?

Recent Cases

Two recent cases decided in December 2014 may shed some light on how district courts are interpreting Supreme Court precedent in this area. The following cases involved an analysis of five patents using the *Alice* framework, four of which were found to claim patent-ineligible subject matter, with one being found to claim patent-eligible subject matter.

Intellectual Ventures I LLC v. Manufacturers and Traders Trust Co.

At issue in this case were four patents varying in scope and subject matter. The ‘137, ‘587, and ‘701 patents were found to be directed to patent ineligible subject matter.⁷ The ‘382 patent, however, was found to pass muster under the *Alice* framework.

The ‘137 Patent

The claims here were found to be directed to patent-ineligible subject matter. The claims were directed to “a system and method which allows consumer users to establish self-imposed limits on the user’s spending (borrowing) such that when the limit is reached the consuming user is notified.”⁸ Essentially, the representative claims included the steps of (1) storing a user profile containing a user-selected category with a preset limit, and (2) presenting “transaction summary data” for such category and limit.⁹

Under prong one, the court first determined that “the core idea of the patent is allowing users to set self-imposed limits

on their spending and receive notifications regarding such limits, i.e., setting up a budget and tracking their spending.” The court also stated that “[b]udgeting is a longstanding and fundamental practice.”¹⁰ As a result, the court determined that representative claim 12 was directed to an abstract idea.

Under prong two, the court looked for an “inventive concept” in the claim elements.¹¹ However, the court noted that the claims were directed to generic computing functions such as storing and processing data, and that these functions were essentially synonymous with the term “computer.”¹² As such, storing and processing data added little or nothing beyond the use of a general purpose computer, which the Supreme Court stated “cannot transform a patent ineligible abstract idea into a patent eligible invention.”¹³

The ‘587 Patent

The claims here were directed to “a method, system and apparatus for automatically organizing a large number of images that may be obtained from a variety of different sources.”¹⁴

Under the first prong, the court noted that the core idea of the patent, “scanning groups of images and organizing them . . . is akin to a computerized photo album, a routine and conventional idea.”¹⁵ Thus, the claims were directed to an abstract idea.

Under prong two, the court again looked for an inventive concept. To start, the court discussed the “scanner” and “computer” mentioned in the claims and specification. The court found that neither the scanner nor computer amounted to a meaningful limitation, because the focus of the claims was on the method of organizing digital photos, not on the use of the scanner.¹⁶ Thus, although the claims included the use of a scanner and computer, the claims did “no more than ‘computerize’ a known idea for organizing images.”¹⁷ The patent was therefore deemed to be directed to patent-ineligible subject matter.

The '701 Patent

The claims here were directed to facilitating “electronic purchases while maintaining privacy of customer billing data.”¹⁸ Essentially, the representative claims cover “providing a user with aliases to use in conducting transactions.”¹⁹

Under prong one, the court noted that “the claimed solution is not necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.”²⁰ The claimed solution (*i.e.*, providing aliases to achieve privacy in financial transactions) existed prior to and independent from the Internet, and thus the court found that the claims were directed to an abstract idea.²¹

Under prong two, the court examined the specification and determined that the computing devices and components disclosed (e.g., “electronic device,” “storage medium,” and “processor”) were generic, not specialized.²² In addition, the claims were written such that they could be practiced with minimal or no use of a computer. Thus, the court found no additional “inventive concept” and the patent was held to be directed to patent-ineligible subject matter.²³

The '382 Patent

The claims here were found to meet the requirements that the Supreme Court set forth in *Alice*. The claims covered “a system for selectively tailoring information delivered to an Internet user depending upon the particular needs of the user.”²⁴ Essentially, the claims cover the idea of providing a customized web page to a user with content based on the user’s profile and navigation history.

The court did not definitively state whether the claims were directed to an abstract idea. Instead, the court listed the steps of the representative claims, and ended the discussion of prong one by stating that “[d]efendants argue that such an idea is ‘abstract and non-inventive.’”²⁵ The court then moved directly to prong two, perhaps because the outcome of the this analysis turned out to be determinative.

Under prong two, the court noted that both the problem solved by, and solution claimed by the '382 patent were necessarily rooted in computer technology.²⁶ It seems that the court focused on the idea that the problem of inconsistent webpage display for a user could not exist without the presence of computers. Likewise, the solution claimed also

could not exist without computers. As a result, the claims did not merely apply a known business process to the technological environment of the Internet, and therefore, the claims recited patent-eligible subject matter.²⁷

MyMedicalRecords, Inc. v. Walgreen Co.

In this case, the claims of the '466 patent were directed to “methods for providing a user with

But Alice has produced more questions than answers regarding patent eligibility. First, in the realm of claims performed by a computer, what exactly does the Court consider to be patent-eligible subject matter? Second, what steps can a practitioner take when drafting an application to prevail under the two prong Alice framework, or to avoid getting caught up in a § 101 challenge at all?

the ability to access and collect personal health records associated with the user in a secure and private manner.”²⁸

The court used the two step analysis from *Mayo* and *Alice*, and explained that under the first prong the court determines the purpose of the claims, and then determines whether that purpose is abstract.²⁹ A given purpose is abstract if it is an age-old idea, such as natural laws and fundamental mathematical relationships.³⁰ Here, the court determined that the concept of secure record access and management (the purpose of the '466 claims) was an age-old idea, and was thus abstract.³¹

Under prong two, the court looked for an inventive concept. The court determined that

all concepts in the representative claim were routine, conventional functions of a computer and server (e.g., associating access information with a user, providing a user interface, receiving files, receiving requests, sending files, and maintaining files).³² As such, the patent broadly and generically claimed the use of a computer and the Internet to perform the abstract purpose of the claims. Because the claims only contained routine and conventional functions, the addition of a computer to the claims did not amount to adding an inventive concept, and the patent failed on the second prong.³³

Questions and Takeaways

As discussed in the introduction, *Alice* left some questions unanswered. First, in the realm of claims performed by a computer, what exactly does the court consider to be patent-eligible subject matter? While the cases above do not provide a succinct answer, they do point us in the right direction. For instance, much of the courts’ analyses revolved around the idea that a claimed solution that makes use of an already existing idea merely performed by a computer is not patent eligible. Each idea in the '137 patent (budgeting), the '587 patent (organizing images into a photo album), and the '701 patent (providing aliases to complete financial transactions) existed well before computers, and each was deemed abstract. More specifically, budgeting was deemed a “longstanding and fundamental” idea, and a digitized photo album was deemed a “routine and conventional” idea. Thus it would seem that novel ideas are more likely to be deemed patent eligible, even where they are arguably abstract.

Other attempts to clarify the questions left by *Alice* are related to determining what constitutes an “inventive concept,” or enough additional limitation to an abstract idea, law of nature, or natural phenomenon, to render a claim patent eligible. This is essentially asking “what does it take to pass muster under the second prong?” Arguably, all five patents described above were found to be abstract under the first prong. However, only the '382 patent was found to meet the requirements of the second prong. The court noted, regarding the '382 patent, that both the problem solved and solution claimed were necessarily rooted in computer technology. Thus, problems arising specifically in the computer realm (and not existing outside that realm) are more likely to

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Tips for Developing a Cost-Effective Foreign Patent Strategy

By Emily Miao, Ph.D. and Daniel F. Gelwicks

According to a recent survey of over 100 companies and universities, nearly 93% who filed patent families in 2013 filed at least some of those patent families internationally.¹ While obtaining patent protection abroad is important in a global economy, obtaining international patent protection can be a substantial financial expense in addition to the legal and patent office fees that may have already been spent for preparing and prosecuting a U.S. patent application, which can *average* between \$8,500 and \$25,000.² Foreign patent filing decisions should take into account all of the potential additional costs associated with filing, prosecution, and annuity fees, as well as translation and legal service costs for hiring patent practitioners in each jurisdiction. Global filing, prosecution, and annuity estimates over the lifetime of a patent application can be generated on a country-by-country basis; however, the actual costs can change over time and with currency fluctuations. Furthermore, it may take several years after filing a foreign patent application before a patent actually issues. Unfortunately, foreign patent protection can be quite expensive, with the varying costs easily totaling in the thousands of dollars for each application. Since the costs associated with filing and obtaining foreign patent protection are significant, strategies that control, delay, consolidate, or minimize costs are advantageous. In this article, five tips are discussed for developing a cost-effective strategy for obtaining foreign patent protection.

Determine whether foreign patent protection of an invention is necessary

For many companies or applicants the decision to foreign file is something that the company cannot afford to ignore and the company needs to carefully consider whether foreign patent protection is necessary and appropriate. In deciding where to file for foreign patent protection, the company needs to know whether the associated product/service will potentially be sold and where it will be made in the future. In addition to budget, factors to consider include location of substantial

markets, distribution centers, manufacturing centers, potential licensees and/or partners, competitors and where they are filing for patent protection, and whether the patent can be readily enforced in the country of interest.

Not all inventions warrant foreign patent protection. For instance, if the company's invention is not a core technology, if there is no substantial market abroad, or if there are no interested licensees or partners for the

The decision to pursue foreign patent protection should be based on factors such as customer location and whether the innovation is even patentable in the relevant countries.

invention, foreign patent protection may not be necessary. Likewise, foreign patent protection may not be appropriate if the invention may become obsolete within a short period of time, such as for some software inventions. If a company's main market and all of its competitors are in the U.S., domestic patent protection alone may be sufficient to prevent competitors from making, using, selling or offering to sell competing products/services in the U.S.

An applicant also needs to determine whether the invention is even patentable subject matter in the relevant countries. Some countries may have patent laws that treat technology differently than in the U.S. For instance, many patent offices (such as in Europe, and unlike in Australia and the U.S.) prohibit patenting of methods of treatment or diagnosis on human or animal subjects. Other countries make it more difficult or impossible to patent business methods

or software, such as in China, India, and the European Patent Office ("EPO").³ In some instances, it may be possible to draft the claims in certain ways in order to overcome these obstacles and to obtain meaningful patent protection.

While there is no per se "Rule of Thumb" approach in deciding which specific countries should be included in all foreign filing strategies, a U.S. based company may consider Europe as an important market. Other markets include very large economies such as China, Japan, and India; other relatively large economies such as Brazil, South Korea, and Mexico; and English speaking countries such as Canada and Australia. Popular individual countries within Europe include France, Germany, Italy, Spain, the U.K., and Spain.

For many companies, the ultimate selection of foreign countries in which to pursue patent protection can be industry specific. Often a company files in countries where the company or its competitors have a substantial market or future market opportunity for the innovation, or where the company or its competitors manufacture its products. Not surprisingly, the definition of "substantial market" can differ depending on the type of innovation involved. For instance, if the innovation relates to semiconductors, patent protection in China, Taiwan, South Korea, and Japan may be of interest as manufacturing sites. For medical devices, Europe, Japan, China, South Korea, Canada, Mexico, and Australia are popular choices. For technology patents, Europe, South Korea, Japan, Taiwan, India, China, and possibly Canada, Brazil, and/or Australia are usually considered. For pharma/biotech innovations, Europe, Canada, China, Japan, and Mexico are usually considered, and possibly India, Australia, Brazil, Indonesia, South Korea, Singapore, Israel, New Zealand, Philippines, Russia, Thailand, Vietnam, and/or South Africa. In a recent survey, which polled over 100 companies and universities, the respondents ranked Europe, China, and Japan as the top foreign jurisdictions for patent filings.⁴ Not surprisingly, 45.6% of the respondents reduced their foreign filing costs by filing in fewer foreign countries.⁵

Consider a PCT application to defer costs and foreign filing decisions

There are three basic approaches for an applicant to file for patent protection abroad. One approach is to directly file a national application in the patent office of a foreign country, assuming that the company has already received a foreign filing license to export the technology outside of the U.S.⁶ Another approach is to file an application at a regional patent office, such as the European Patent Office (“EPO”).⁷ The third approach is to file a Patent Cooperation Treaty (“PCT”) application.⁸

If an applicant is interested in only one or two foreign countries, it may be advisable to file directly in each country even though the upfront foreign filing costs will be incurred right away. These filing costs can be substantial, especially if a translation of the application into a foreign language is required.

Alternatively, if a company is interested in countries only from a certain region of the world, it may be possible to file one patent application at a regional office.⁹ A number of countries have treaties in place that would allow an applicant to file one application at a regional office.¹⁰ Once granted, the patent can be effective in designated countries in the region. For instance, an applicant may be only interested in European countries and, therefore, the company may want to consider filing regionally under the European Patent Convention (“EPC”), as opposed to filing a separate application in each European country.¹¹ Once the European application is granted, the company can pick and choose

which specific European countries to register the European patent within a specific time frame.¹² Similar to filing directly, the upfront filing costs can be substantial; however, this approach may allow an applicant to defer the translation costs.¹³

If a company is interested in more than two countries, if it is unsure of which countries to file in, and/or if it cannot afford the upfront foreign filing costs, the company should consider filing a PCT international application as a more cost-effective route. Applicants who file a PCT application can defer national phase filing (and associated costs) for at least 18 months and up to 30 months or longer (depending on the country).¹⁴ Applicants also obtain a patentability search report and a written opinion regarding the claims which may be helpful in deciding whether or not to pursue national stage filings. According to a recent survey, a large majority of the respondents (96%) relied on PCT applications for foreign filing.¹⁵

A carefully drafted patent application can help to control prosecution costs and the final outcome

While the EPO and U.S. Patent and Trademark Office (“USPTO”) have similar requirements for patent applications, the same application can have dramatically different prosecution results in Europe and the U.S. For example, the applicant may not be able to make claim amendments to an EPO application

in the manner that is available during U.S. prosecution because of European priority rules.¹⁶ As a result, the claims issued by the EPO to a U.S. applicant may be unnecessarily narrow under European standards and may not sufficiently protect the invention. Therefore, an applicant needs to make sure that the patent application is drafted in such a way that it would comply with the different requirements of both the USPTO and EPO.

An applicant should also consider the size of the patent application including any drawings and limit the application to a certain number of pages and claims, depending on the filing rules for a specific patent office.¹⁷ Many countries charge excess page and claim fees for applications that exceed the limit. While there is no excess claim fees charge in a PCT, added costs may be incurred to prepare preliminary amendments to reduce the total number of claims when it is time to file an application at the national stage. In some countries, such as China and India, excess claim fees can be charged for additional claims above the local limit, even if a preliminary amendment to reduce the number of claims is submitted with the application at the time of national filing. In other words, additional fees may be incurred just to reduce the number of claims from the original PCT application.¹⁸ Perhaps more importantly, additional translation costs will be incurred for translating the excess claims and pages.

In many instances, foreign associates receive patent applications transmitted to them from domestic firms or companies, and the

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have solutions that are deemed to pass muster under the second prong. It seems that even where the claimed solution is arguably abstract, if the underlying problem is one arising solely in the computer realm, this may be sufficient for the claims to cover patent-eligible subject matter.

Finally, what steps can a practitioner take when drafting an application to prevail in a post-*Alice* world? A practitioner may want to frame the problem being solved in a light more closely associated with the operation of computers and computer networks. For example, where possible, a given problem should be explained in a way that considers the problem one unique to the computer realm, *e.g.*, an improvement to a computer, such as an enhancement to its hardware, operating

system, user interface, and/or applications. The courts may be more likely to consider the claimed solution one necessarily arising in the field of computers, and thus more likely to cover patent-eligible subject matter.

Endnotes

- 1 *Alice Corp. v. CLS Bank Int'l*, 573 U.S. ___, 134 S. Ct. 2347 (2014).
- 2 *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. ___, 132 S. Ct. 1289 (2012).
- 3 *Alice*, 134 S. Ct. at 2355 (citing *Mayo*, 132 S. Ct. 1294, 96-97) (internal citations omitted).
- 4 *Id.* at 2360.
- 5 *Id.* at 2357.
- 6 *Id.* at 2358.
- 7 *Intellectual Ventures I LLC v. Mfrs. and Traders Trust Co.*, No. 13-1247-SLR, 2014 WL 7215193 (D. Del. Dec. 18, 2014).
- 8 *Id.* at *6.
- 9 *Id.*
- 10 *Id.*
- 11 *Id.*
- 12 *Id.* (citing *FuzzySharp Techs. Inc. v. 3DLabs Inc.*, 447 Fed. Appx. 182, 185 (Fed. Cir. 2011)).
- 13 *Alice*, 134 S. Ct. 2358.
- 14 *Intellectual Ventures*, at *10.
- 15 *Id.*
- 16 *Id.*
- 17 *Id.*

- 18 *Id.* at *11.
- 19 *Id.*
- 20 *Id.*
- 21 *Id.*
- 22 *Id.* at *12.
- 23 *Id.*
- 24 *Id.* at *9.
- 25 *Id.*
- 26 *Id.*
- 27 *Id.*
- 28 *MyMedicalRecords, Inc. v. Walgreen Co.*, No. 2:13-cv-00631-ODW (SHx), 2014 WL 7339201, at *2 (C.D. Cal. Dec. 23, 2014).
- 29 *Id.* at *3.
- 30 *Id.*
- 31 *Id.*
- 32 *Id.*
- 33 *Id.*

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foreign associates will handle the translation and the filing of the patent application. In some instances, it may be more economical to have a patent application translated domestically into various foreign languages, and then send it to the foreign associates for final review and filing. Many domestic translation companies are willing to provide some discount, particularly where volume translations are involved.

Evaluate portfolio on a continuous basis

Companies may decide later on not to sell products or services in a particular country and thus may have no real interest in maintaining patents in such a country. Thus, regular reviews to determine a company's interest in a particular country and to "prune" the IP portfolio by abandoning or selling portions of the foreign patent portfolio can be helpful in reducing the overall costs of prosecuting foreign patent applications and annuity costs in maintaining foreign patents. Ideally, these reviews should begin after filing for the patent(s) and continue on a regular basis until the patent(s) expire or are abandoned.

Patent Prosecution Highway can provide significant cost savings

While periodic pruning of the patent portfolio is one way to keep foreign patent costs in check, the Patent Prosecution Highway ("PPH") program provides another option to help streamline the examination of patents in numerous individual countries based upon an original application filed in a single patent office.¹⁹ Generally, the PPH program originates from a series of agreements between various countries whereby the patent prosecution work product from a home patent office or the PCT that indicates allowable subject matter in an application can be used to expedite prosecution in other countries. The PPH enables an applicant who receives a positive ruling on patent claims from one participating office to request accelerated prosecution of corresponding claims in another participating office, which may allow the applicant to obtain a patentability decision in the second office more quickly. Furthermore, the PPH promotes patent application processing efficiency by allowing the examiner in the office of later examination to reuse the search and examination results from the office of earlier

examination, thereby reducing workloads and duplication of efforts.²⁰ As a consequence of this program, the PPH may help an applicant to save time and reduce costs. Currently, the U.S. has PPH agreements in place with several foreign patent offices including Australia, Canada, Finland, Japan, the United Kingdom, Korea, and China.²¹ In many instances, the PPH program has resulted in higher grant rates, fewer office actions, and reduced pendency time and therefore can streamline and reduce overall foreign patent prosecution.²²

Conclusion

For many companies, innovations are the lifeblood of the company and in many instances, it may be important to protect these innovations from competitors by securing IP rights abroad. However, the costs for obtaining and maintaining foreign patent protection can be expensive. The decision to pursue foreign patent protection should be based on factors such as customer location and whether the innovation is even patentable in the relevant countries. Where large upfront foreign filing costs are prohibitive to a company, a PCT application can serve as a useful vehicle to defer foreign filing costs and to provide companies additional time to make foreign filing decisions. Furthermore, by drafting applications carefully, evaluating the IP portfolio regularly, and taking advantage of the PPH program, companies can realize significant additional cost savings.

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Endnotes

- 1 The 2014 U.S. Global Patent & IP Trend Indicator, Inovia, p. 7, available at <http://inovia.com/resources/global-ip-trends-indicator> [hereinafter *Inovia Report*].
- 2 See Stephen Yelderman, Improving Patent Quality with Applicant Incentives, 28 Harv. J.L. & Tech. 77, 136 n. 9 (2014) (discussing the range of average application and prosecution fees as somewhere between \$8,500 to upwards of \$15,000); see also David Fagundes & Jonathan S. Masur, *Costly Intellectual Property*, 65 Vand. L. Rev. 677, 690 (2012) ("an average patentee will spend approximately \$22,000 to successfully prosecute a patent application."); see also Am. Intellectual Prop. Law Ass'n, Report of the Economic Survey 27 (2013) (reporting that the median attorneys' fees for preparation of an original application for a relatively complex patent was between \$8,500 and \$10,000 in 2012).
- 3 See Michael Geoffrey, Steven Birt and Ian Buckley, *Patentability Of Business Methods — A Global Comparison*, Law 360, available at <http://www.law360.com/articles/319307/patentability-of-business-methods-a-global-comparison>.

- 4 *Inovia Report*, *supra* note 1, at p. 10.
- 5 *Id.* at p. 15.
- 6 See M.P.E.P. § 140 regarding Foreign Filing Licenses.
- 7 There are four regional groups for which a regional patent may be obtained via the PCT. Those are the ARIPO Patent, the Eurasian Patent, the European Patent, and the OAPI Patent. See http://www.wipo.int/pct/en/texts/reg_des.html for more details.
- 8 The PCT is an international treaty with more than 145 Contracting States as of July 2014. The PCT makes it possible to seek patent protection for an invention simultaneously in a large number of countries by filing a single "international" patent application instead of filing several separate national or regional patent applications. For more information, see <http://www.wipo.int/pct/en/training/index.html> and <http://www.wipo.int/pct/en/faqs/faqs.html>.
- 9 See n. 7, *supra*.
- 10 See n. 7, *supra*. See also <http://www.wipo.int/pct/en/faqs/faqs.html> ("If you are a national or resident of a country which is party to the ARIPO Harare Protocol, the OAPI Bangui Agreement, the Eurasian Patent Convention or the European Patent Convention, you may alternatively file your international patent application with the regional patent Office concerned, if permitted by the applicable national law.")
- 11 For more details see <http://www.wipo.int/pct/guide/en/gdvol2/annexes/ep.pdf>. See also n. 7, *supra*.
- 12 For specific details with regard to the validation of a European Patent Grant, see How to get a European Patent, Guide for Applicants, Part 1, available at [http://documents.epo.org/projects/babylon/eponet.nsf/0/8266ED0366190630C12575E10051F40E/\\$File/guide_for_applicants_part1_10_13_en.pdf](http://documents.epo.org/projects/babylon/eponet.nsf/0/8266ED0366190630C12575E10051F40E/$File/guide_for_applicants_part1_10_13_en.pdf) [hereinafter *Applicant Guide Part 1*].
- 13 See How to get a European Patent, Guide for Applicants, Part 2, PCT Procedure before the EPO, p. 37, available at <http://www.epo.org/applying/international/guide-for-applicants.html> ("For the purpose of the international search by the EPO as ISA the application must be written in one of its three official languages, i.e. English, French or German. Where the international application is filed in a different language the applicant must file with the receiving Office a translation into one of the three official languages of the EPO. Such translation must be furnished within one month of the date of receipt of the international application by the receiving Office.") [hereinafter *Applicant Guide Part 2*].
- 14 Note that some countries are members of the Paris Convention but not the PCT and therefore to obtain a patent in those countries the application must be filed in that non-PCT country within one year from the filing date of the home application. See PCT Frequent Asked Questions 2 and 11, available at <http://www.wipo.int/pct/en/faqs/faqs.html> ("Direct or Paris route: you can directly file separate patent applications at the same time in all of the countries in which you would like to protect your invention (for some countries, regional patents may be available) or, having filed in a Paris Convention country (one of the Member States of the Paris Convention for the Protection of Industrial Property), then file separate patent applications in other Paris Convention countries within 12 months from the filing date of that first patent application, giving you the benefit in all those countries of claiming the filing date of the first application."). See also n. 10, *supra*. Some of these non-PCT countries include Argentina, Jordan, Pakistan, and Venezuela. For a full listing, see http://www.wipo.int/export/sites/www/pct/en/texts/pdf/pct_paris_wto.pdf.
- 15 *Inovia Report*, *supra* note 1, at p. 8.
- 16 See European Patent Convention, Part VII, Chapter 1, Article 123, Amendments, available at <http://www.epo.org/law-practice/legal-texts/html/epc/2013/e/ar123.html>; see also Guidelines for Examination, Part H, Chapter III, 2.1 Indication of amendments and their basis under Rule 137(4), available at http://www.epo.org/law-practice/legal-texts/html/guidelines/e/h_iii_2_1.htm.
- 17 For U.S. applications, there is a fee for each additional 50 sheets that exceed 100 sheets. There is also a fee for each independent claim in excess of three and for all claims in excess of 20. See USPTO Fee Schedule, available at <http://www.uspto.gov/web/offices/ac/qs/ope/fee010114.htm>. For PCT applications, additional fees are required if the application contains more than 30 pages. See *Applicant Guide Part 2, supra* note 13, page 32, point 170. For European applications, if the European patent application comprises more than 15 claims, there is a claims fee in respect of each claim over and above that number. For the 51st and each subsequent claim the amount of the claims fee is higher. Also, an additional fee is payable for European patent applications comprising more than 35 pages. See *Applicant Guide Part 1, supra* note 12, page 33, point 92 and page 39, point 118.
- 18 In China and India, the total number of claims is calculated based on the number of claims in the PCT application, so reducing the number of claims after international PCT publication will not end up reducing costs. See PCT Applicant's Guide – National Phase – National Chapter – CN, State Intellectual Property Office of the People's Republic of China, page 4, available at <http://www.wipo.int/pct/guide/en/gdvol2/annexes/cn.pdf>; see PCT Applicant's Guide – National Phase – IN, Indian Patent Office, page 3, available at <http://www.wipo.int/pct/guide/en/gdvol2/annexes/in.pdf>.
- 19 See generally USPTO Press Release, February 10, 2014, Implementation of the Global and IPS Patent Prosecution Highway (PPH) Pilot Programs with Participating Offices, available at <http://www.uspto.gov/patents/law/notices/global-ip5.pdf> [hereinafter *PPH Implementation*]; Global and IPS Patent Prosecution Highway (PPH) Frequently Asked Questions (FAQs) available at http://www.uspto.gov/patents/init_events/pph/FAQGlobalPPH.pdf; USPTO's PPH Flyer, available at http://www.uspto.gov/patents/init_events/pph/PPHFlyerNov2014.pdf; Trent Kirk, *PTO Announces Expansion of Patent Prosecution Highway*, 23 No. 10 Intell. Prop. & Tech. L.J. 8, CCH Incorporated (October, 2011).
- 20 *PPH Implementation, supra* note 19, at p. 1.
- 21 Beginning in January 2014, 13 Intellectual Property Offices have begun a Global Patent Prosecution Highway (PPH) arrangement. The 13 offices involved are IP Australia (IP Australia), Canadian Intellectual Property Office (CIPO), Danish Patent and Trademark Office (DKPTO), National Board of Patents and Registration of Finland (NBPR), Japan Patent Office (JPO), Korean Intellectual Property Office (KIPO), Nordic Patent Institute (NPI), Norwegian Industrial Property Office (NIPO), Portuguese Institute of Industrial Property (INPI), Russian Federal Service for Intellectual Property (ROSPATENT), Spanish Patent and Trademark Office (SPTO), United Kingdom Intellectual Property Office (IPO), and United States Patent and Trademark Office (USPTO). Samuel Helfgott, 6 No. 5 Landslide 54, IP Group News, American Bar Association, p. 1. In addition to the Global PPH and IPS PPH pilot programs, the USPTO has PPH agreements with the following Intellectual Property Offices around the world: Colombia, Czech Republic, Germany, Mexico, Nicaragua, Philippines, Poland, and Taiwan. See http://www.uspto.gov/patents/init_events/pph/.
- 22 USPTO Performance and Accountability Report, Fiscal Year 2013, pp. 20-21 ("The Patent Prosecution Highway (PPH) continues to be a successful work sharing vehicle, delivering prosecution advantages to both users and IP offices. PPH provides users reduced numbers of office actions, lower costs, higher grant rates, and faster prosecution, and they are all factors that drive the growth of the program.")



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