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# Patent Reform: The Impact on Start-Ups

By William Ahmann and Tenaya Rodewald

In 1838, Abraham Lincoln, the only US president to be granted a patent, identified patents themselves as one of the three greatest inventions of all time. Patents, he later said, “added the fuel of interest to the fire of genius in the discovery and production of new and useful things.”

The US Congress has the power “[t]o promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”<sup>1</sup> The patent statute, first enacted in 1790, has undergone only three major revisions since its inception, in 1793, 1836, and 1952. The America Invents Act of 2011, which President Obama signed into law on September 16, 2011, is the fourth. Prior revisions appear to have been made for the purpose of promoting progress by improving the predictability of patent protection. For example, the reform in 1836 created the patent office in order to establish a procedure for vetting patents; the reform in 1952 incorporated into statutory law judge-made law (common law) of the time and introduced the concept of obviousness in an effort to remove the subjectivity of the flash-of-genius test that was in the common law of the time. Prior reform aided innovators, including what today might be called start-ups, by ensuring predictability throughout the patent procurement and enforcement processes.

## The America Invents Act of 2011

This article is intended to address the practical impact on start-ups of the America Invents Act of 2011.<sup>2</sup> A thesis of this article is that some of the most visible changes to the law, including the new first-(inventor)-to-file system, will not have the

extreme negative consequences on start-ups and small businesses that some predict. Such changes do not significantly alter the best practices that companies should *already* employ if they wish to effectively protect their patent rights. On the other hand, changes to the post-grant review processes discussed hereinafter, such as providing discovery during *inter partes* review, significantly favor larger, more well-funded patent challengers or infringers over small-entity patent owners. Such changes could have the practical effect of weakening patent protection for start-ups.

## Pre-Grant Patent Prosecution

There are six provisions in the America Invents Act of 2011 that impact patent procurement for start-ups:

1. Changing from first-to-invent to first-(inventor)-to-file system;
2. Eliminating the possibility of invalidating a patent for lack of disclosure of the best mode for practicing the invention;
3. Facilitating pre-issuance third-party submissions;
4. Making it easier to file a substitute oath for a non-cooperative inventor;
5. Introducing a micro-entity that is entitled to reduced fees; and
6. Expanding the scope of prior art to include material known or used by others in foreign countries.

## First-(Inventor)-to-File

Perhaps the most well-known item of patent reform is the switch from first-to-invent to first-(inventor)-to-file. Unlike some other commentators, we believe that this change will not significantly alter what already was a *de facto* first-(inventor)-to-file system in the United States.

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Although small businesses will perhaps feel compelled to rush to the patent office due to the inability to use well-documented lab notebooks to prove prior inventions, the practice of trying to prove prior invention was always a desperate measure. The positions we take in this article are not intended to dismiss lightly the concerns that inventors may have about the need to rush to the patent office but rather to note that best practices will not change dramatically.

Most nations have IP laws that vary at least slightly relative to the IP laws of other countries, but they generally all conform to international treaties, such as the Patent Cooperation Treaty (PCT) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Despite conformity with these agreements, the United States was virtually alone in one respect: Inventors in the United States were able to obtain a patent if they were the first to invent the subject matter, even if another inventor beat them to the patent office.<sup>3</sup> In most of the world, the first inventor to file is entitled to the patent. Therefore, changing from first-to-invent to first-(inventor)-to-file harmonizes the US patent law with virtually all of the rest of the world in that respect.

Moreover, the reality is that, for better or worse, even prior to the new law, the United States had a *de facto* first-(inventor)-to-file system. The decades-old best practice for patent filing has been to file early, not to wait and trust that some day, through an interference proceeding, it would be possible to prove that you were the first to invent. (Even under the prior law, a first inventor was barred from obtaining a patent if the first inventor delayed filing for more than a year after another inventor obtained a patent on the invention or for more than a year after the invention was disclosed in print anywhere or in public use or on sale in this country.)

To see why it has always been best to file early, consider how interference proceedings, the dedicated means of enforcing the first-to-invent system, have worked in practice. In an interference proceeding, a board at the US Patent and Trademark Office (PTO) or a federal court determines whether the party that was first to file (the senior party) or the party that was allegedly first to invent (the junior party) was entitled to a patent.

Interferences are expensive and complicated. Commissioner of Patents and Trademarks Q. Todd

Dickenson stated, “[interferences] cost us an enormous amount of money in judicial time, among other things. I certainly hope there’s going to be a day when we don’t have to worry about interferences anymore.”<sup>4</sup> Interferences are very expensive to the parties as well. Currently, they are typically resolved in about a year but can go on for up to five years with judicial review.

Interferences are relatively uncommon and the senior (first-to-file) party almost always prevailed. The PTO Web site includes statistics for 2010 during which there were 52 interferences declared and roughly 400,000 patents filed. Moreover, the senior party almost always wins. Judge Rich stated, “[a]t least 75 percent of all interferences, as I understand it, are decided in favor of the first to file, the senior party in other words.”<sup>5</sup> As Gene Quinn, President & Founder of IPWatchdog, Inc., reported on a presentation by David Kappos, Director of the PTO, “you have to go back to FY 2007 to find a prevailing small entity Junior Party in an interference.” Conversely, small entities that were the *senior* party have prevailed since 2007.<sup>6</sup>

The statistics demonstrate that even under the old system start-ups and small businesses that waited too long to file could not predictably use interferences as an effective means for challenging a second inventor who beat them to the patent office. Further, start-ups that filed first were harmed by the first-to-invent system because they had to defend against expensive interference proceedings that they ultimately won. Thus, the statistics indicate that, even under the prior law, small entities did not really have the option of taking their time to file patent applications.

The first-to-invent system was also a trap for the unwary. For the class of innovators that are sometimes referred to as “wantrepreneurs,” the first-to-invent system occasionally led them to believe that they could delay patent filings, trusting that the first to invent was the party entitled to a patent once they eventually filed. This led to some instances—actual, but anecdotal—where individuals waited too long to file for patent protection and lost their rights. When it is generally well-known that the system is first-inventor-to-file, the instances of this occurring will probably be reduced.

At the margins, then, the new law is likely to force some start-ups to adopt the best practice of filing early, a practice they have always needed to

effectively protect their rights. The change will also be slightly better for start-ups that were employing the best practice because it might eliminate a costly interference challenge. However, it is very likely that any particular start-up will be unaffected by the change to first-(inventor)-to-file.

### **Derivation Proceedings**

Some commentators may argue that the US first-to-invent system worked even without effective interferences because entities self-policed. The theory might be that second inventors simply refrained from filing patents because they knew that, in principle, the true first inventor could invalidate their patent. However, self-policing can arise only if the second inventor knows about the first, and so most self-policing situations would be derivation situations in which the second inventor actually derived its invention from the first.

Importantly, the new law maintains protection for inventors in derivation situations. In such cases, the new law permits a junior party to institute a *derivation proceeding* to challenge a senior party's patent on the ground that the senior party derived the invention from the junior party.<sup>7</sup> A derivation proceeding must be filed within one year of the publication of a claim to an invention contained within the earlier application.<sup>8</sup> In addition, the law permits an inventor who owns a patent with a later effective date to institute a *civil action* to invalidate an earlier filed patent on the grounds that the invention was derived from the inventor seeking relief.<sup>9</sup> Any such action must be brought within a year of the issuance of the patent on the allegedly derived invention.<sup>10</sup>

An inventor will have to provide more evidence to prevail in a derivation proceeding than it would have in an interference. For example, in addition to providing evidence of the date of invention, the inventor will have to present evidence that the deriver had sufficient access to derive the invention from the inventor.<sup>11</sup> Thus it remains to be seen whether derivation proceedings will be efficient and effective enough to offer meaningful protection from derivation that interferences, in practice, did not provide for small businesses.

### **A First-(Inventor)-to-Disclose System?**

While the new law has been touted as creating a first-to-file system, more than that, the law appears

to create a first-to-disclose system. This is because publication, public use, or sale of an invention by an inventor is prior art to all later-filed applications *except the inventor's*.<sup>12</sup> The publicly disclosing inventor then has a year to file a patent application on the disclosed invention. In other words, under the new law, it doesn't necessarily matter if you invent first or even if you file first, you will not be able to obtain a patent if another inventor publicly discloses the invention (through publication, use, or sale) before you either publicly disclose the invention or file your application. Conversely, if you publicly disclose the invention first, you "clear the decks" going forward of anyone else who was contemplating filing an application, and you buy yourself a year in which to file your own application.<sup>13</sup>

This may seem like a startling change in the law, but it may make little difference in practice. One reason is that it has *always* been a good idea to win the race to the Patent Office. Another is that there are likely few situations in which an inventor will be able to publish, publicly use, or sell an invention but will not be ready to file even a provisional patent application. A third is that most countries, unlike the United States, require that inventors file for patent protection prior to a patent disclosure; patent rights are destroyed by public disclosure prior to obtaining a patent filing date. In short, there are likely few situations in which the inventor who can win the race to publicly disclose an invention will not also win the race to the patent office.

### **Best Mode Requirement**

A philosophical rationale for the patent system is that sharing innovations with the public is good for the public but may be disadvantageous to the innovator. On the other hand, having a monopoly on a secret technology is bad for the public but may be good for the innovator. The government brokers a deal between inventors and the public: In exchange for sharing an innovation with the public, a patent holder is granted a limited monopoly to exploit the invention. In the United States, this deal between the public and a patent holder can be met only if the patent holder was sufficiently forthcoming, such that the public receives not only the invention but also the best way of practicing the invention known to the innovator ("the best mode"). The best mode requirement is unique to the United States, so elimination of the best mode

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requirement would harmonize US patent law with that of the international community. The new law does not eliminate the requirement that the patent disclose the best mode, but under the new law, a patent cannot be invalidated or held unenforceable for failure to disclose the best mode.<sup>14</sup> Therefore, it is possible that the new law will for practical purposes eliminate the best mode requirement.

The change is unlikely to be a significant change for start-ups because most will still want to comprehensively disclose their inventions. To see why, a little background on patent disclosures is illustrative.

In addition to the best mode, US law has two more disclosure requirements that must be met in a patent application: enablement and written description.<sup>15</sup> The enablement requirement means an invention must be described such that a person can make and use the invention. The written description requirement means that inventors must clearly convey to persons of skill in the relevant art that they were in possession of the invention. It is unnecessary to understand the distinction between the three disclosure requirements for an understanding of how the elimination of best mode will impact start-up companies. Suffice to say the three requirements are closely related to one another.

The primary question that a patent draftsman will consider as it relates to the disclosure requirements is whether the disclosure is enabling. In order to be enabling, the disclosure should "drill down" into a big-picture concept until a point at which further disclosure is no longer necessary to make and use the invention. Claims are the portion of a patent that spell out the metes and bounds of the disclosed innovation. If a concept is not covered by the claims, it is not covered by the patent. Claims can be drafted broadly, to cover the big-picture concept or, more likely, contain some amount of detail from the drill-down disclosure.

Not uncommonly, a patent examiner rejects claims during the patent procurement process, and applicants then may find it desirable to narrow claims by adding further detail to the claims to overcome prior art references the examiner used in rejecting the big-picture concept. Narrowing claims in this way is possible only if the patent application *already* includes the further detail; an applicant may not add new material to narrow the claims in light of a prior art reference that an

examiner used to reject claims. For this reason, bet-the-company patents, which are most patents filed by early stage start-ups, are comprehensively enabled as a best practice.

Comprehensive disclosures will still be desirable under the new law even though the best mode requirement can no longer be used to invalidate the patent. In theory, the patent examiner could reject an application because it lacks a best mode, but this is exceptionally rare today and there is no reason to believe that it will become more common. More importantly, it will remain desirable to include significant detail, probably including the best mode, when meeting the enablement and written description requirements. An applicant may then narrow the claims to specific implementations of a big picture concept, including the best mode implementation, if this proves necessary to overcome prior art.

#### *Further Explanation: How Much Detail Should an Application Contain?*

To understand how the practical elimination of the best mode requirement will be relatively unimportant to start-up entrepreneurs, let us start with an extreme example. Say in 1863, well before the Wright brothers' patent filed on March 23, 1903, Abraham Lincoln files a patent for a flying machine. The specification and the claims include a single phrase: "A flying machine." For the purpose of this example, let us assume that there is no flying machine prior art. It is not clear from Lincoln's disclosure whether Lincoln actually has possession of the flying machine that is claimed, nor is it enabled such that others can make and use the invention, nor is there a best mode shown since there is no mode at all. So even if Lincoln actually invented the flying machine, Lincoln cannot get a patent on this flying machine for failure to meet all three of the disclosure requirements.

Now consider how the disclosure would have to be fleshed out in order to meet the enablement requirement. Starting with the big picture concept of a flying machine, Lincoln would have to drill down into the details of the invention and continue drilling down until a point is reached where persons could make and use the invention (thus meeting the enablement requirement). If the invention is clearly described, this is also evidence that the inventor was in possession of the invention (the

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written description requirement is met), and the application probably includes a description of the specific invention (it discloses a best mode). At some point, it becomes unnecessary to drill down further. For example, it may be unnecessary for Lincoln to disclose the molecular structure of the materials used to construct the flying machine.

So a description of an invention can be illustrated as an inverted cone where the big-picture concept is at the top, the enabling disclosure is increasingly detailed as one progresses toward the bottom of the inverted cone, and the bottom of the inverted cone represents the point at which one needs no further description to convey the invention.

Consider another example that actually meets the disclosure requirements for a flying machine. Let us say William Taft, unaware that the Wright brothers had a patent on a flying machine, invented a flying machine in 1906 and filed a patent identical to the Wright brothers' patent. A patent examiner cites the Wright brothers patent as prior art against Taft. Taft cannot overcome the prior art by amending his claims to include a widget that is part of his flying machine and not taught by the Wright brothers, because he did not disclose the widget in his application. Taft provided an enabling disclosure, written description, and best mode for a flying machine, but since the enabled disclosure is anticipated by the prior art, the lack of an enabling disclosure for the widget is a critical flaw in the patent. Taft fails to obtain a patent.

As Taft found out, an application that contains insufficient detail may fail to overcome prior art. In other words, the "punishment" for failing to fully disclose the best mode is that an inventor might not be able to obtain a patent. Hence, drilling-down from the big-picture concept to the point at which no further description is necessary should often be done comprehensively, and meeting the best mode requirement is frequently a side effect of meeting the enablement requirement and disclosing the invention for which patent protection is sought.

#### **Strategies and Benefits under the New Law**

Although comprehensive disclosure will remain the norm under the new law, there may be circumstances in which a company will wish to maintain the best mode as a trade secret and avoid disclosing it in the patent application. This will now be more of an option, though a patent practitioner may balk

at the prospect of deliberately failing to meet the best mode requirement. Consider however, that if the best mode is worth keeping secret because it will be hard for others to ascertain, it is likely that the differences between a second-best mode and the best mode are functional, and the best mode is independently patentable over the second-best mode. By failing to file for patent protection on the best mode, the door is left open for another to obtain patent protection on it. In such circumstances, an entrepreneur may wish to independently patent both the best and second-best modes or to file for patent protection on a big-picture issue and file another patent application to specifically cover the best mode. When the best mode requirement is not strictly enforced, each of these patent strategies becomes viable, and start-ups may be more flexible in their patent-filing approach without fear that the best mode requirement will cause them harm.

Eliminating the possibility that the best mode requirement will be used to invalidate a patent may also slightly reduce the cost of enforcing patents. Each issue raised in litigation imposes additional, non-trivial costs, so eliminating the possibility of best mode litigation will lower litigation costs in some cases. However, because best mode arose only rarely in litigation, eliminating challenges based on best mode will have little noticeable impact.

In sum, the *de facto* elimination of the best mode requirement might make companies more comfortable with being selective in their disclosures, though they still must disclose new, useful, and non-obvious inventions that are properly enabled and supported by written description. It is possible that this will benefit certain companies or industries more than others, and there is an argument that the public will obtain less in return for the grant of a limited monopoly to an inventor. As it relates to start-ups, however, it is difficult to see this change as anything other than positive, albeit only slightly, because of increased flexibility and decreased costs.

#### **Preissuance Submissions by Third Parties**

The new law expands the window during which third parties can submit prior art challenging a pending patent application. The window expands from two months to six months and generally begins on the date that the application is published.<sup>16</sup> Importantly, the new law also permits third parties to explain the relevance of the prior art

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that they submit, something forbidden under prior rules.<sup>17</sup> Whether these changes are important can best be understood by considering the role of prior art searches in the patent process.

Patent applicants have a duty to disclose prior art references that a patent examiner would consider pertinent. However, patent applicants do not have a duty to *search for* prior art references; the disclosure duty only applies to references of which the patent applicant is actually aware. Some patent applicants perform prior art searches even though they have no duty to do so and disclose prior art uncovered by the search to the PTO, but many do not conduct the search.

The most common reasons not to conduct a prior art search are that it costs money, it can result in liability if prior art is found but not properly disclosed and filed, and it makes the patent examiner's job easier, thereby reducing the probability of obtaining a patent. The most common reasons to conduct a prior art search are that the patent is more defensible in litigation and reexamination after a robust initial examination, and claims can be drafted to get around prior art, including art that patent examiners might actually find in their own searches, before filing the patent application. (Some technologies are more searchable than others, making prior art searching more common in certain industries than in others.)

In some ways, applicants will benefit from third-party prior art searches done as a result of the new preissuance procedures without encountering some of the drawbacks of doing prior art searches themselves. Prior art searches done by third parties will not cost the applicant money or time, and there will be no associated liability for the applicant when a third party conducts the search. Of course, the procedure will still make the patent examiner's job easier, which will result in a higher probability of a patent's not being issued. On the other hand, as with prior art searches the applicant does, the patent will be more defensible after robust examination.

Additionally, and perhaps counter-intuitively, the patent applicant will be able to draft claims around the prior art submitted using the proposed procedure, helping the applicant to obtain a defensible patent. Unlike post-grant proceedings, during which patentees cannot enlarge the scope of the patents claims or introduce new matter, during preissuance an applicant may freely amend the

patent claims, including by enlarging their scope, provided the applicant does not "introduce new matter into the disclosure of the invention."<sup>18</sup> Thus, particularly for applications with comprehensive disclosures, it will be possible to draft claims around the third-party prior art submissions unless the prior art directly encompasses the claimed invention. Since start-up companies are more likely to file comprehensive disclosures than companies that, for example, use their patents primarily as licensing tools, start-up companies can expect to benefit from the new procedure when the submission can be claimed around.

In practice, examination of patents often takes longer than six months after publication, so third-party submissions are likely to occur early in the prosecution process and present a relatively small burden to the applicant. Indeed, from the applicant's perspective, it will simply be as if the patent examiner conducted a more thorough search. If the PTO increases the speed at which patent applications are examined, third-party submissions could come later in the prosecution process, which could be more burdensome for patent applicants who have already overcome the patent examiner's "best shot." There is no reason, however, to believe that the patent examination process will change substantially.

How often will the third-party submission process be used against a start-up? It may be the case that competitors will use the preissuance submission procedure to harass start-ups. However, the cost of performing a prior art search and making the requisite submission could very well be more than the cost to the patent applicant in presenting arguments for patentability over the reference or amending the claims. Further, as noted, once claims survive robust scrutiny, it strengthens later arguments for validity. Moreover, if a competitor submits its best prior art references during preissuance, it may have less ammunition in later procedures, such as reexamination or litigation. Waiting for post-grant procedures has the advantage (from the perspective of the requester) of making the patentee unable to amend claims freely, and as discussed further herein, several types of post-issuance review will likely be freely granted.

Third parties will be unable to submit a stream of harassing prior art references, since the six-month submission window is still fairly narrow. In addition, other considerations often weigh

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against submitting multiple references. Among other things, the power of an excellent reference could be diluted by a patent examiner's having to consider too many other references that are not as compelling. Also, the patent office has the ability to consolidate references into a single action, and when references are redundant the examiner will likely craft a single rejection argument from the redundant references. The burden on the applicant will then be no greater than if a single non-redundant reference was submitted.

Without a doubt the third-party submission procedure will result in some patents that otherwise would have issued being abandoned. On the other hand, there will be only a small increase in costs associated with pre-issuance submissions, applicants will be able to benefit from amending their claims freely in light of the third-party submitted prior art, and there will be an increased likelihood that a patent issued following a third-party submission will be held valid if tested again. Accordingly, start-ups can for the most part ignore the preissuance submission process, provided that they keep in mind the need to file disclosures comprehensive enough to permit them to claim around any prior art a third party may submit.

### **Substitute Oath**

Inventors are required to submit an oath with a patent filing in which they state that the invention is theirs. Occasionally an inventor is non-cooperative or a patent application is filed without all of the formal paperwork, such as the oath, and an inventor becomes non-cooperative before the oath can be obtained. The new rules will make it easier to file a substitute oath for a non-cooperative inventor. This change should be beneficial to all companies, including start-ups, because making the process of protecting patent rights less complex, and therefore less expensive, is a boon to all rights-holders and potential rights-holders.

In order to file the substitute oath under the new law, an assignee must set forth the facts that the inventor is under an obligation to assign the invention but has refused to make the required oath, and provide any further information or showing the PTO might require under its rules.<sup>19</sup> Alternatively, the inventor can make the required oath in the assignment of the patent rights instead of in connection with the patent application itself.<sup>20</sup>

It is true that inventors may lose some of their ability to use the oath in negotiations under the new law, but this is not a bad outcome: Withholding the oath as a negotiating tactic is rarely done; the oath is not logically related to any ownership interest; and impeding the patent process harms all potential rights-holders, including the inventor. Inventors typically assign rights to their inventions to a company, university, or other assignee in accordance with an employment, independent contractor, or other agreement. If there is any dispute regarding ownership, it should be handled in that context, not in the context of whether an inventor is willing to swear that he is the inventor after, or even before, ownership interests have been allocated. When a company does not own the patent rights, the company will not be able to obtain rights by filing a substitute oath. Thus this change is beneficial to assignees, including start-up assignees, and is not unfair to inventor assignors.

### **Micro-Entities**

The PTO charges fees for filing a patent application and other procedures. Small entities are entitled to pay one-half the usual fee in many cases. A new class of entity, the micro-entity, will be entitled to pay one-quarter the usual fee. For early stage start-up ventures, this will be advantageous for what should be relatively obvious reasons. Under the new provisions, a micro-entity is defined as one that:

- Qualifies as a small entity under PTO regulations;
- Has not been named as an inventor on more than four previously filed applications (excluding foreign and provisional applications and applications that the applicant had to assign to a previous employer);
- Had an income of less than three times the median household income in the previous calendar year; and
- Has not assigned, and is not under obligation to assign, an ownership in the application to an entity with more than three times the median household income.<sup>21</sup>

Start-ups that have yet to achieve any income may be able to readily qualify as micro-entities and benefit from the reduced filing fees.

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## Expanded Scope of Prior Art

Under the new law, the scope of prior art is expanded to include material sold or publicly used by others in foreign countries.<sup>22</sup> Previously, such material was prior art only if it was sold or publicly used in the United States. This change may slightly expand the scope of prior art searches but will not otherwise dramatically affect patent applicants. Sale or public use in foreign countries was already covered by publications that are available in the United States. Evidence of sale or public use is relatively rarely used as prior art material, which is almost always a written document that is available online or, more likely still, a patent publication.

## Post-Grant Patent Ownership

There are four items in the America Invents Act of 2011 that impact post-grant patent ownership for start-ups:

1. Post-grant review proceedings;
2. Defense to infringement based on earlier inventor;
3. Virtual marking; and
4. Litigation changes.

## Post-Grant Review Proceedings

Until now there were two post-grant review proceedings, *ex parte* reexamination and *inter partes* reexamination. The new law leaves *ex parte* reexamination largely unchanged, but it renames *inter partes* reexamination as *inter partes* review and dramatically amends the *inter partes* process, and it creates a new form of review called post-grant review. The changes to *inter partes* review and the new post-grant review process enhance the ability of well-funded patent challengers to impose what could be heavy burdens on smaller, less well-funded entities by forcing them to defend their patents in these new, possibly very costly proceedings.

### The Inter Partes Procedures

Under the prior and new *inter partes* procedures, the third-party requestor stays involved in the reexamination process. (This contrasts with *ex parte* reexamination, in which the requestor is not involved, and indeed, may remain anonymous.) Similarly, under the old and new laws, and as with

*ex parte* reexamination, *inter partes* requests are limited to challenges to the novelty or nonobviousness of the claimed invention, and petitioners can submit patents or patent publications only as prior art.<sup>23</sup> Under the prior law, however, requests were first handled by a single patent examiner, then the petitioner or patentee could appeal an adverse decision to the Board of Patent Appeals and Interferences, and then to the federal court. There was no document or deposition discovery for either the initial reexamination or the appeal to the Board, although parties could submit declarations. Under the old system, in practice, the requestor and the patent examiner “ganged up” on the patentee during *inter partes* reexaminations, and for this reason *inter partes* reexamination had a higher probability of invalidating patents than *ex parte* reexamination, but it also cost more.

The new *inter partes* review process will be even more expensive and easier to obtain. First, the threshold for *inter partes* review is changed from a determination by the PTO Director that “a substantial new question of patentability exists” to one that there is “a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”<sup>24</sup> Under the substantial-new-question-of-patentability test, reexamination requests were granted with high probability; under the reasonable likelihood test, it is likely that virtually no *inter partes* review requests will be turned away. Also, under the new test it is easier for petitioners to repeatedly petition for review if they are initially denied. Under the old substantial-new-question test, it would eventually be harder to challenge a patent because a new submission and petition cannot be redundant with a previous one (if it is redundant, it does not present a substantial *new* question of patentability). The new test provides no such reprieve from repeated review requests.

Moreover, the new law provides for limited discovery during *inter partes* review, including depositions of witnesses and other discovery “otherwise necessary in the interest of justice,” and even provides for sanctions for discovery abuses.<sup>25</sup> Unless the Board is careful to restrain discovery, it will dramatically increase the cost of *inter partes* review. Finally, for patentees *inter partes* review involves a single bet-the-patent stage before the patent Board. Under the new law, *inter partes* reviews go straight



to the Patent Trial and Appeal Board (what used to be the Board of Patent Appeals and Interferences) with no initial determination by a single examiner.<sup>26</sup> Patentees will need to develop all their evidence at this stage because patentees dissatisfied with a Board decision have only one option: appeal to the Court of Appeals for the Federal Circuit (the CAFC) where patentees will have to rely on the record developed before the Board, and the CAFC will apply a review standard deferential to the Board's determination.<sup>27</sup>

For these reasons, the new system permits a patent challenger or potential infringer with deep pockets to impose potentially great costs on small business patent holders by initiating *inter partes* review. The small business would then have to undertake expensive discovery and put forth its best effort at the outset to defend its patent to the Patent Trial and Appeals Board, since this is the only chance that the patent holder will have to develop a factual record in support of its patent. If the PTO makes an adverse ruling, the small business patentee must then choose between abandoning or narrowing its patent claims or taking a costly appeal to the CAFC.

There are very few constraints on the ability of a larger company with deep pockets to use the *inter partes* review process to impose these costs on a smaller rival. It is true that once a patent owner institutes an infringement action, a party seeking to challenge a patent has only a year to request *inter partes* review.<sup>28</sup> Nor may a party wishing to challenge a patent seek *inter partes* review if it has already filed a civil action, a declaratory judgment action, challenging the patent in court.<sup>29</sup>

Once an *inter partes* review takes place, the petitioner for review may not bring another petition for review, a civil action, or an action before the International Trade Commission on any ground that the petitioner raised or reasonably could have raised in the *inter partes* review.<sup>30</sup> This last limitation is strongest, but it appears unlikely to greatly reduce the threat posed by the new *inter partes* review process, complete with discovery and limited to one, all-important stage in the PTO followed only by deferential review by the CAFC.

#### **Post-Grant Review**

Post-grant review provides another means by which large, well-funded challengers can impose

heavy costs on smaller patentees and make it difficult for smaller patentees to effectively protect their patent rights. The new post-grant review process allows a party to challenge a patent on any ground of patentability using any evidence of unpatentability.<sup>31</sup> (Recall that *inter partes* review is limited to challenges to novelty and nonobviousness based on patents and printed materials.) A petition for post-grant review, however, must be made within nine months of the patent's issuing.<sup>32</sup> Review will be granted if "it is more likely than not that at least one of the claims challenged in the petition is unpatentable."<sup>33</sup> If granted, review is heard by the Patent Trial and Appeal Board,<sup>34</sup> with appeal possible only to the CAFC.<sup>35</sup>

As with the *inter partes* proceedings, the petitioner remains involved in the post-grant review process, which is adversarial and adjudicatory in nature.<sup>36</sup> Some discovery will be available, although the PTO will have to issue regulations clarifying how much discovery the parties will have and nominally discovery will be limited to "evidence directly related to factual assertions advanced by either party in the proceeding."<sup>37</sup> Also as with *inter partes* proceedings, a party may not seek post-grant review if it previously filed a civil action challenging the patent.<sup>38</sup> The law makes some effort to limit multiple, redundant post-grant review requests, including providing that, in deciding whether to institute post-grant review, the Director of the PTO may take into account whether the same or substantially the same prior art or arguments previously were presented to the PTO and may reject a petition if it presents only old arguments.<sup>39</sup> Moreover, after post-grant review, a party may not "request or maintain [another] proceeding before the Office" or file a civil action or an action before the International Trade Commission on any ground that the petitioner raised or reasonably could have raised in the post-grant review.<sup>40</sup>

A patentee may move once by right to amend the patent to cancel claims or propose substitute claims, although substitute claims may not enlarge the scope of the patent claims or introduce new matter.<sup>41</sup>

Because there is a nine-month window for bringing post-grant review petitions, entities with the resources to monitor issuance of new patents will be in the best position to timely challenge their competitors' patents under this procedure.

However, the law appears to force patent challengers to choose between filing for post-grant review and filing for *inter partes* review or filing a civil action, because after a post-grant review the petitioner may not "request or maintain a *proceeding* before the Office" or file a civil or ITC action on any grounds it raised or could have raised in post-grant review.<sup>42</sup> It remains to be seen if this language does, in fact, prevent patent challengers from filing successive post-grant and *inter partes* review petitions or civil lawsuits on the same grounds. Because there is only a nine-month window for post-grant review, it is unlikely that challengers will be able to file civil actions first and then request post-grant review. Therefore, challengers will likely need to carefully consider whether post-grant review rather than *inter partes* review or a civil challenge will provide the type of discovery, the timetable, and the venue the challenger prefers.

#### *Ex Parte* Reexaminations, Old and New

Under both the prior and new law, *ex parte* reexamination is initiated by a third party who submits prior art references and arguments alleging a patent lacked novelty or was obvious in light of the prior art. Reexamination is granted if the materials submitted raise substantial new questions of patentability.<sup>43</sup> A single examiner considers the submission, and patentees can narrow their claims only in order to claim around the newly asserted prior art. Third-party requestors do not remain involved in the process after submitting their requests, and indeed, they may remain anonymous. The new law does not change *ex parte* reexamination in these respects, but it clarifies the appeals process. A patentee dissatisfied with the examiner's decision may still appeal to the Patent Trial and Appeal Board (what used to be the Board of Patent Appeals and Interferences), but under the new law it is now clear that appeals of the Board's decision may be made only to the CAFC and not to a district court.<sup>44</sup>

#### Defense to Infringement Based on Earlier Inventor

Currently, entities that practice business methods, but do not disclose to the public, have a defense to infringement if they can prove that the business method was being used commercially prior to the priority date of a business method patent. The new rules would extend the defense to all subject matter,

rather than limiting the defense to business methods.<sup>45</sup> Specifically, under the new law, a party has an infringement defense with regard to anything used in manufacturing or a commercial process if: (1) the party commercially used the patented invention, in the United States, either in connection with an internal commercial use or an actual arm's length sale of a useful end result of such commercial use; and (2) the commercial use occurred at least one year before the filing date of the patent at issue or the public disclosure of the invention.<sup>46</sup>

As with several other changes discussed in this article, this change reinforces the good recordkeeping requirements that were already best practices under the prior law. Whereas under the first-to-invent system, good records were necessary because proving prior inventorship is only possible with sufficient evidence of conception and continuous diligence, good records may now be useful in proving earlier inventorship as a defense to infringement.

In practice, the true beneficiaries of this reform are more likely large corporations that fight patent infringement lawsuits with some regularity and particularly those that have a wealth of data to prove prior commercial use. This is because, in order to assert the defense, a defendant first must be accused of patent infringement. Once accused, availability of the defense will allow defendants to more effectively pressure for settlement, but on the whole it is reasonably likely that, in order to ascertain whether the defense is effective, a defendant will have to wait until verdict. Since patent litigation costs millions of dollars, some start-ups will find it prohibitively expensive to make practical use of the new defense.

Moreover, start-ups that pursue a patent enforcement strategy will find that this defense increases costs and decreases the probability of success in court. Start-ups that do not have the money to sue for patent infringement can sometimes rely upon companies that specialize in providing funds for potential litigants or on law firms that take the case on contingency. If costs increase and probability of success decreases, it should be more difficult for start-ups to find such backers.

The most successful start-ups employ a strategy that includes both development of product and development of a patent portfolio. Those that pursue both strategies are statistically more likely to succeed than those that pursue one or the other.

Adding an additional defense to patent infringement will not change this statistic. So while this item of reform probably has a net adverse impact on start-up technology companies, it is unlikely to impact the operating procedures of start-up companies.

### Virtual Marking

The new law permits virtual marking of goods by stamping them with the word "patent" or "pat." and a Web address that associates the patented goods with the relevant patent numbers.<sup>47</sup> This provision will make it slightly easier to mark a product as patented. This should be an advantage to all patentees, albeit a minor one.

### Litigation Changes

The new law specifically prohibits accused infringers from being joined as defendants in an action, or having the actions against them consolidated for trial, solely because they are accused of infringing the same patent or patents.<sup>48</sup> Now accused infringers may be joined only if a right to relief is asserted against the parties jointly, severally, or in the alternative.<sup>49</sup> Arguably, this was always the rule under Federal Rule of Civil Procedure 20, but the rule was not always reliably enforced. Patentees, in particular patent trolls, or non-practicing entities, often join many defendants in a single suit simply because the defendants are all accused of infringing the same patent. Now plaintiffs will have to file separate lawsuits against each accused defendant or group of related accused defendants. Cases may still be consolidated for discovery, but it is unclear if related cases will be consolidated for other purposes, such as claim construction. It may be that defendants that will now be sued separately will have an easier time moving for a change of venue away from plaintiff-friendly districts. This could be particularly true for small entity defendants that will be in a better position to relocate cases to their home jurisdictions than will large companies with a nation-wide presence. Thus, the change in joinder rules may benefit small-entity defendants but will likely make litigation more costly for small entity plaintiffs.

The new law also eliminates the ability of private plaintiffs to bring false marking cases unless they have suffered a competitive injury as a result of the false-marking, in which case the plaintiff can

recover only actual damages.<sup>50</sup> We do not anticipate this change having an impact on the majority of start-ups.

### Other Issues

There are several provisions in the America Invents Act of 2011 that are not discussed in this article and that, while perhaps important, do not appear to have the same impact, or perceived impact, on start-ups.

### Notes

1. US Constitution, Art. 1, § 8, cl. 8.
2. Citations to the US Code (U.S.C.) are citations to the new law unless otherwise noted. A copy of the new law may be found at [http://www.uspto.gov/aia\\_implementation/bills-112hr1249enr.pdf](http://www.uspto.gov/aia_implementation/bills-112hr1249enr.pdf). The PTO also provides a table showing when each provision of the new law will take effect. See [http://www.uspto.gov/aia\\_implementation/aia-effective-dates.pdf](http://www.uspto.gov/aia_implementation/aia-effective-dates.pdf). A copy of the prior law may currently be found at [http://www.uspto.gov/web/offices/pac/mpep/consolidated\\_laws.pdf](http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf) (last visited Oct. 5, 2011).
3. One could debate whether first-to-invent is "better" than first-(inventor)-to-file on a philosophical level. From the outset, it has been the purpose of the US patent system to grant to an inventor a limited monopoly for sharing inventions with the public. In other words, the patent system protects inventors who share their inventions, not inventors who keep the inventions secret. So even on a philosophical level, there is tension between protecting inventors for the act of inventing with a first-to-invent system and protecting inventors for the act of sharing their inventions with the public in a timely fashion with a first-to-file system.
4. 1999 Interference Roundtable Transcript, Wed., Oct. 20, 1999.
5. 32 BNA Patent, Trademark & Copyright Journal 478 (August 28, 1986).
6. Start-ups are frequently small entities, e.g., companies that have fewer than 500 employees. This article generally assumes small businesses have fewer resources than large ones, though that obviously need not be the case.
7. 35 U.S.C. § 135.
8. 35 U.S.C. § 135.
9. 35 U.S.C. § 391.
10. 35 U.S.C. § 391.
11. The advent of these procedures reinforces another best practice: good recordkeeping. Such recordkeeping, such as maintaining a detailed lab notebook, has long been best practices in the United States because proving prior inventorship was only possible with sufficient evidence of conception and continuous diligence. Now