

Patent Reform in the United States: Lessons Learned

The new America Invents Act resolves some old issues, but it creates some worrisome new ones.

BY DAN L. BURK

After seven years of controversy and debate, on September 16, 2011, President Obama signed into law the first major revision of American patent law in nearly 60 years. The legislation covers a wide range of procedural, substantive, and administrative changes, from fee-setting at the U.S. Patent Office, to implementing several new administrative procedures involving patents, to precluding patents on certain categories of subject matter.

Entitled the “America Invents Act” (AIA), this legislation amends the current patent law with provisions that take effect over an 18 month period from the time of signing, culminating in major transitions in March of 2013. The legislation has been touted by politicians as modernizing U.S. patent law, harmonizing it with that of our trading partners, simplifying the patent application process, and—most incredibly—stimulating 200,000 new jobs.

The long gestation period of the statutory revisions was the direct result of the varied experiences of different stakeholders with the patent system and consequent disagreement as to the changes necessary to ensure effective patent outcomes. In particular, the pharmaceutical and information technology sectors held strongly differing views as to whether the patent system was meeting their needs.

I have previously observed in work with Mark Lemley of Stanford that this seven-year standoff illustrates the problems of developing a uniform system to apply to different industries. (See “Courts and the Patent System,” Summer 2009.) Elsewhere, we

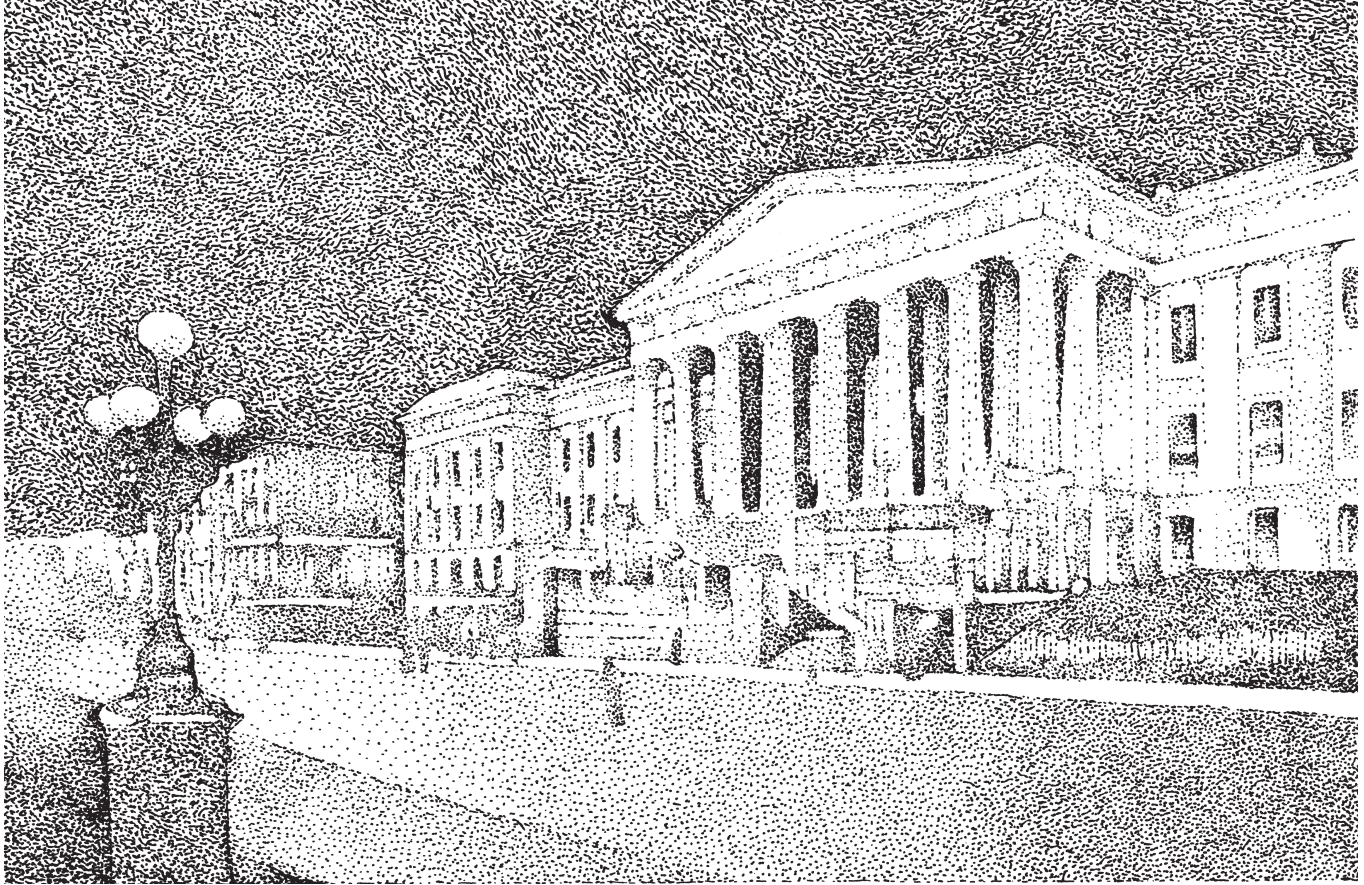
DAN L. BURK is Chancellor’s Professor of Law at the University of California, Irvine, School of Law.

have outlined a workable institutional and doctrinal framework for overcoming this problem. Here I measure the AIA against this framework, to evaluate both the end product of the American reform effort and whether the outcome might have been improved. I conclude that the AIA is in many respects consonant with the prescriptions of our framework, but falls disappointingly short of what might have been achieved.

Dynamic Patent Incentives

There appears to be a general consensus among regulators, commentators, and practicing attorneys that the primary purpose of the patent system is to encourage innovation by providing financial rewards and incentives for new technological developments. Yet we know that the innovation profiles of different industries differ dramatically. Technologies in some sectors require massive investment to develop new advancement; others require only modest investment. Some technological investments lend themselves to a natural return on investment; others cannot be recouped without vigilant legal enforcement. Some technological developments are durable, providing substantial returns for many years; others have rapid turnover and short product life cycles. Developing a patent system to accommodate such diversity poses a substantial challenge.

Moreover, not only the outcome of innovation, but innovation itself, is in a state of constant flux. Technological innovation by its nature is situational, fact-specific, and diverse. Industries mature, reconfigure, and die. New techniques and processes



are adopted, displacing older methods. The tastes and needs of purchasers evolve. New ventures spring into existence and old ones fade into senescence or bankruptcy. Sources of revenue and capital shift or redirect their attention to new opportunities.

As I have detailed in previous work with Lemley, technological development is dynamic and likely to outpace patent statutes that are not equally dynamically updated. Indeed, we might almost say that if the patent law is not struggling to keep up with the pace of innovation, the law is a failure; the whole point of the law is to encourage progressive change. The irony is that a successful patent statute continually sows the seeds of its own obsolescence, meaning that the patent system itself must constantly innovate to keep pace.

Thus, a fundamental question for any patent reform is how to accommodate almost continual reform; in essence, how to constantly re-invent the statute itself. In most democratic systems, there is a choice of three state institutions that might possibly be designated to oversee the constant updating of legal incentives in the face of dynamic innovation: legislatures, courts, or administrative agencies. Each of these institutions has its own competencies and deficiencies that bear on the configuration of a dynamic patent system.

Innovation Oversight

The first instinct in a democracy is to give responsibility for statutory adaptations to the institution with the greatest degree of public accountability, as well as the greatest capacity for information gathering. Typically this is thought to be the legislature. However, timely adaptation of patent statutes through legislative oversight is simply impractical. Enormous political capital is typically required to muster the votes needed to enact any

new legislation. Given the many demands on the attention of a national legislature, it is not realistic to believe that such political will can be mustered year-in and year-out in order to update patent statutes. Indeed, among the myriad political issues surrounding transportation, health care, taxation, diplomacy, and law enforcement, repeated patent reform is unlikely to take precedence. It is simply not realistic to expect that the majority of a legislative body will continually update itself on the latest technological and economic developments facing innovators.

And even were patent statutes to command the ongoing attention of the legislature, it might be better if they did not. As the saying goes, “No man’s life, liberty, or property is safe when the legislature is in session.” A vast literature on public choice theory, together with practical experience of the legislative process, warns that each new statutory enactment provides opportunities for rent-seeking by favored constituencies. Legislative proposals quickly become encrusted with special-interest provisions or are redirected to unexpected ends.

The manifest impracticality of continuous legislative attention leaves courts and administrative agencies as the likely institutional stewards of statutory tailoring. Decisions in judicial or quasi-judicial adjudication are typically made by a small body or even a single decisionmaker. On the whole, this structure avoids the protracted negotiation and political wrangling of the legislative process. Because a judge or judicial panel is small, outcomes do not require accumulating scores or perhaps hundreds of votes to reach a decision. Input for the decision comes through evidentiary procedures. A diversity of viewpoints, which might be important to broad policy declarations, is sacrificed in favor of focus and expediency.

Courts and agencies each have their own institutional plusses and minuses. Administrative agencies have somewhat greater

ability to gather facts, although the evidence-gathering capacity of a court system is typically very substantial. Agencies tend to suffer from the problem of capture, often developing too cozy a relationship with those they regulate. Agencies may also be subject to the same lobbying that afflicts legislatures; indeed, they may be under considerable political pressure from the legislature that controls the agency budget. Courts are not free from these problems, but they can largely be insulated from influence peddling by mechanisms such as life tenure. This of course means that they are also insulated to some degree from popular sentiment, making them often the least democratic option.

The competencies, as well as the incompetencies, of each type of institution are also a major consideration. Legislatures, and to some extent executive agencies, tend to regulate prospectively, before a factual situation arises, and so attempt to anticipate the likely course of events. Much of the impossibility of continuing legislative insight over innovation stems from the prospective nature of statutory enactments. Legislatures are engaged in predictive regulation, and we have said that innovation is by nature largely unpredictable. Indeed, injudicious attempts by legislative bodies to anticipate the course of future events are more likely to deter or suppress innovative activity than it is to promote it.

Where prediction is difficult, regulation may be best delegated to fact-specific ex post oversight—the type of responsive regulation most suited to the courts. Courts, and agencies acting in a judicial capacity, tend to render decisions after the fact, sometimes even as events are unfolding. Of course, this does not mean that courts or agencies assume the role properly conducted by a democratically elected body; to the contrary, they are engaged in practical application of direction given by a legislature. Hopefully, the legislature will chart a course for innovation policy, outlining the broad parameters by which it should proceed and which can then be implemented by the governmental institutions better suited to that task.

Assessing the America Invents Act

How does the text of the AIA and its legislative circumstances line up with these general and predictive observations? Both the process observed enacting the statute and the final product are largely consonant with what one would expect from the tenets of dynamic patent oversight that I have outlined above. In many aspects, the outcome of the reform effort is congruent with the recommendations drawn from the model. Where the AIA fails to meet expectations, those failures are largely predicted by the model. This means there is both good news and bad news in comparing the statute with the paradigm just described.

We begin by considering the good news, which is in some sense the absence of certain bad news. Here one is reminded of the classic Arthur Conan Doyle story “Silver Blaze,” in which Sherlock Holmes states that he solved the mystery on the basis of the “curious incident of the dog in the night-time.” Scotland Yard Inspector Gregory, puzzled by Holmes’ statement, observes that the dog did nothing in the night-time. Holmes replies that this observation pinpoints the curious behavior: it was the dog’s

failure to act that provided the vital clue to solve the mystery.

In a very similar fashion, it is the curious behavior of the U.S. Congress with regard to the AIA that is perhaps the most striking feature of the legislation—that is, the legislature’s inaction is perhaps more important than its action. For example, burning issues that were considered to be of pressing importance when the statutory reform process was begun, and which at some point drove the consideration of patent reform, were entirely absent from the final bill that was enacted. That seems curious behavior indeed.

The absence of provisions addressing these matters stems from a combination of ongoing legislative deadlock and parallel ongoing interpretive work of the courts. As I have observed in previous work, the very long and often contentious process of patent statute revision was long and contentious because of the very different innovation profiles of different industries.

In particular, the pharmaceutical and information technology industries were frequently at odds over the proper issues to be addressed in patent reform legislation. Elements of the patent system that seemed to work well for pharmaceutical innovators seemed to computer and software innovators to be entirely dysfunctional, and vice-versa. Year after year, legislation stalled because of disagreement over what needed to be reformed and what shape reform should take. Industries disagreed over patent reform because the kinds of patents needed in one industry were not necessarily what were needed in another.

Yet, over the extended period of legislative wrangling, these many “pressing” issues became irrelevant or unimportant, having been largely resolved by the courts in the interim. Indeed, every indication is that the reform legislation was ultimately able to move forward because many points of disagreement had been rendered moot by judicial resolution. This is precisely what one would have hoped; that the majority of issues could be addressed through modulation of the existing statute by the courts.

An important corollary to this observation is that the new statute is similarly silent on a variety of controversies that were at the forefront of patent law during the reform process. For example, there is an ongoing and highly contentious question, both in the United States and abroad, regarding the scope of patentable subject matter. Recent judicial decisions, at both the trial and appellate level, have grappled with whether patents should be available for biological materials such as genetic sequences. The Supreme Court and lower courts have considered and reconsidered the availability of patents for so-called “business methods” and the proper extent of patents on computer software. These issues were not only under active consideration in the courts, but also in the Patent Office, and commentary on the question has become a cottage industry among academics and members of the practicing bar.

One might have expected Congress to weigh in on these questions, to help resolve the controversy and uncertainty. But with only very slight exceptions, it remained silent on the subject-matter question. Given the debates over software and gene patents, the sparse and narrow subject-matter changes in the AIA are comparatively trivial. The AIA does change the patent statute to state explicitly that human beings are not to be patentable subject matter,

but this as a practical matter is nothing new, as it had been Patent Office policy for literally decades not to issue patents with claims that would encompass human beings. The AIA also precludes from patentable subject matter business methods directed to taxation procedures. But the many other questions involving software patents, or patents regarding genes, or other “products of nature” are left unaddressed by the new statutory provisions.

One might take the legislature’s silence on gene patents, software, and most business methods as tacit approval of such subject matter. Some courts may in fact adopt this position as a matter of statutory interpretation. But the better inference seems to be that the legislature is allowing the judicial interpretive process to play out, entrusting resolution of the problem to the courts. With the Supreme Court actively engaged in the area, having recently decided the *Bilski* business and computer process case as well as the *Prometheus* case on diagnostic methods, and potentially contemplating other cases such as the *Myriad* case on DNA sequence patents, the determination of the specifics of patentable subject matter could be left to the courts to work out.

An additional bright spot regarding the political economy of the AIA might be the inverse proposition from the legislature’s silence on issues that the courts may be best suited to handle: in a number of instances, Congress addressed matters that only it, and not the courts, could properly resolve. For example, the United States has long been unique in the world as a “first to invent” jurisdiction: among competing claimants, the U.S. Patent Office attempts to give the patent to the first inventor in time. Everywhere else in the world, multiple claims are resolved by awarding the patent to the first person to file an application. A central goal of the AIA legislation was to change U.S. practice to harmonize with other nations.

Determining to make such a shift away from a first-to-invent system would be appropriate for neither the Patent Office nor the courts. Such a policy change is properly the provenance of the legislature, and the existing statute offered the other branches of the government no tools to make such changes. Provisions of the AIA that set a new policy in this area are directed to the type of matter that is best addressed by new legislation. This, again, is precisely what one would have hoped to have happen.

America’s Non-Harmonization

Such is the good news on the AIA; unfortunately, there is plenty of bad news to accompany it. The departures from the optimal paradigm are as significant as the instances of adherence.

The first and most noticeable drawback is that the process of legislative enactment produced a bill so distorted from the original parameters of reform as to be essentially unrecognizable. The process of legislative compromise and amendment nearly always changes bills between start and finish, and to some extent this is what is supposed to happen. But in some cases, it may be necessary to distinguish between legislative purpose that has been reoriented and legislative purpose that has been derailed.

Politicians are fond of observing that no legislation is perfect,

often saying that the outcome of the legislative process in a given instance is the best statute that was possible. This type of observation often reflects a path-dependent personal and institutional investment in achieving some outcome, arising during the course of the legislative process. The observation elides the very real possibility that in many instances it might arguably have been better to have had no statutory change, and to have aborted a flawed enactment, rather than to have followed through to a suboptimal result.

The questionable assumption that any statutory revision is better than no statutory revision is apparent throughout the AIA as enacted, but particularly in the handling of patent priority and grace-period revisions. The United States has long been unusual in two aspects of its patent law. One has been the policy of granting the patent to the first inventor, mentioned above. The U.S. Patent Office sometimes needed to conduct lengthy administrative proceedings, called interferences, to collect evidence regarding the applicants’ dates of invention, and then awarded the patent to the earliest inventor. Priority disputes in other countries have simply been determined by granting the patent to the application with the earliest date.

A second signature feature of the U.S. patent system has been a “grace period” between disclosure and application. This has meant that inventors had one year after their invention became publicly known to draft and file a patent application. The time period could be triggered by public disclosure by anyone, either an inventor or a third party. By contrast, most countries do not allow a grace period for the inventor or anyone else, but instead follow a standard of absolute novelty. Public disclosure of the claimed invention immediately bars applicants from obtaining a patent in countries following this standard.

The combination of a “first to invent” system and the one-year grace period tended to put U.S. priority dates out of step with the rest of the world, greatly complicating multi-jurisdictional patent management. Adopting the first-to-file system was expected to harmonize the U.S. system with other nations, decreasing patent prosecution and management costs for U.S. firms and others using the U.S. system.

But the statute that emerged after seven years of legislative wrangling is a unique and idiosyncratic regime that is perhaps a step closer to “first to file” harmonization, but actually constitutes something quite different. The statute now provides that the first inventor to file is entitled to a patent. Unfortunately, the statute gives no indication of what mechanism the Patent Office should now use to determine whether a given applicant is an “inventor” or whether the old interference definitions of “inventor” should continue to apply.

The situation is additionally complicated because the statute retains a qualified “grace period” only for inventors. If the inventor, or someone who has obtained information about the invention from the inventor, discloses the invention, the one-year clock begins to run. The result is a system that is unprecedented in any jurisdiction: a “first inventor to disclose” system that is neither first-to-file nor first-to-invent. This outcome has neither the virtue of

domestic familiarity nor the virtue of international harmonization.

Instead, the system potentially creates opportunities for strategic disclosure of inventions—an inventor could publicly disclose the invention in order to block rivals from obtaining a patent, and then file her own patent application within the one-year statutory period. Such strategies will of course be complicated by the global economy. Recall that most countries do not allow a grace period. An inventor considering strategic disclosure of the invention would have to surrender the opportunity to obtain a patent in most countries in the world. A U.S. patent would still be available within a year, but elsewhere the preclusion would be immediate. This scenario might be most likely for small entities intending to file only in the United States—perhaps because the only real market for the invention is in the United States, or perhaps because the expense of filing patents all over the world is prohibitive.

Other opportunities for strategic maneuvering abound in the short term. The new legislation requires the Patent Office over the next few months to phase out two existing types of administrative challenges to patents, and to implement several new ones. The United States has for many years had a system of *inter partes* “reexamination,” whereby anyone believing that a patent was improperly granted could challenge the patent on the basis of unconsidered prior-art evidence. A year from the enactment of the new statute, this will be replaced with a system of post-grant opposition, which will be more constricted in timing, but broader in its scope of inquiry.

Similarly, the old interference system will be replaced with a new, narrower “derivation” proceeding that is intended only to determine if the invention claimed in an application has been improperly derived from another inventor. Additionally, third parties can now submit to the Patent Office evidence regarding pending applications. Over the next several months, challengers to patents will have to determine whether they wish to invoke such proceedings, and whether it is more advantageous to do so under the old or the new system.

Indeed, some such strategic maneuvers have already been made. Although the courts had made significant progress toward curbing the activity of “non-practicing entities”—sometimes pejoratively called “trolls” (see “The Private and Social Costs of Patent Trolls,” Winter 2011–2012)—who derive income from acquiring and enforcing latent patents, Congress decided to add to the AIA a new “non-joinder” provision, which prohibits lawsuits naming multiple parties for infringing the same patent. The provision raises the cost of enforcement by requiring that patent rights be enforced *seriatim* against putative infringers. Not surprisingly, the day before President Obama signed the AIA, a record number of patent lawsuits naming multiple parties were filed.

Puzzling New Provisions

In addition to the distortion of the original purpose of the statutory revision, the AIA accumulated numerous specialized provisions favoring various constituencies, including independent inventors, universities, software vendors, financial services, and pharmaceutical manufacturers. Some of the most pro-

nounced lobbying, resulting in some of the most spectacular giveaways, came from American universities, which will enjoy special reduced fees for patent applications and processing, as well as special immunities to infringement based on prior use of an invention that is subsequently patented by someone else.

The last major revision of the U.S. patent law in the 1950s differed substantially from the product of the most recent revision. The previous patent act brought little in the way of statutory surprises, but was instead a relatively coherent codification of judge-made law—for example, incorporating into the statute the non-obviousness standard that had been developed by courts during the previous decades. This unfortunately is not the case for the AIA, where most of its changes are unprecedented and novel.

In some cases, the revisions introduced into the statute are new terminology that will require administrative and judicial interpretation before it can be understood. For example, the prohibition on human beings as subject matter, mentioned previously, prohibits patents “directed” to or encompassing a “human being.” This is so ambiguously worded that some have wondered whether a literal reading would prohibit pharmaceutical patents, since they are “directed” to humans. Additionally, some observers have opined that this provision could exclude patents involving human embryos, much as has been done in Europe. However, the statute does not define “human being,” and it may well be that embryos do not constitute human beings (in a legal sense, at least), leaving another contentious ambiguity for the courts to work out.

Similarly, the “first inventor to file” amendments to the statute introduce a new and previously unknown category of prior art against which the patentability of inventions is to be measured. To determine if an invention is worthy of a patent, courts and the Patent Office compare its description to certain classes of known documents and activities, called collectively the “prior art.” These include categories such as “printed publications” and “offers for sale” that have a well-established meaning in American patent law. But the AIA inexplicably adds an undefined and unfamiliar new category: information “otherwise available to the public.” Commentators are already debating what this might include. It will likely take the courts decades to determine what fits into this category and how it is to be differentiated from other previously known categories of prior art.

In other cases, the revisions create gaps or anomalies that can only make sense by looking to past practice. For example, the new statute provides for a novel type of administrative procedure, called “derivation proceedings,” to take place in the Patent Office when an inventor alleges that someone else’s application infringes on the innovator’s work. “Derivation” here denotes some type of intellectual misappropriation or theft. Unfortunately, the new statute provides no definition of “derivation.” This term is taken from a provision of the old statute, section 102(f), where it had been interpreted and had a fairly settled meaning. However, section 102(f) was eliminated from the new statute, which might be taken as a sign that the legislature intended to do away with the matter. In order to implement the new proceedings, it may be that the Patent Office and the courts will adopt the old meaning and

case law regarding section 102 derivation, but it is not free from doubt whether they would be correct to rely on a provision that has been repealed.

Statutory Inconsistencies

In addition to new and undefined statutory terms, the AIA also suffers from inconsistencies between the new amendments to the statute and longstanding provisions that were left intact. These anomalies are numerous, and perhaps the strangest of them is that involving the patent “best mode” requirement.

The United States has long had a best mode requirement, which requires an inventor to disclose in the patent application the best mode known to her of practicing the claimed invention. This is part of the patent bargain: the public grants the inventor a period of legal exclusivity in return for a disclosure of how to make and use the invention, which becomes publicly available knowledge when the patent expires. The best mode requirement is intended to keep the inventor from cheating on the bargain, possibly disclosing inferior methods of practicing the invention while keeping the best method a trade secret.

However, best mode has long been troublesome for patent applicants, in part because it is not required in the majority of countries. An application drafted for submission overseas, and then subsequently filed in the United States, might not include the best mode, resulting in some difficulty in keeping multinational patent applications in compliance with the U.S. standard. Additionally, the best mode requirement is subjective, requiring a determination regarding the best mode known to the inventor—a state-of-mind inquiry that is often difficult for either the Patent Office or a court to assess. There have long been calls for Congress to eliminate the requirement for these reasons.

But that is not what occurred in the enactment of the new statute. What Congress actually did in the AIA is far more confusing. The statute still requires that the inventor disclose the best mode, just as it did before, but Congress specified that failure to disclose the best mode cannot be grounds for invalidating the patent. Under this amendment, the courts cannot declare a patent defective if it lacks the best mode explanation that the patent statute says it must have. This appears to mean that there is effectively no penalty for failure to disclose the best mode.

These provisions seem contradictory and, at best, send mixed signals to patent applicants. They raise questions as to what the statute is intended to accomplish and whether applicants will bother to comply with the statutory requirement. Why would anyone comply with a requirement for which there is no sanction? The possible motivations, besides sheer public-mindedness, are sparse. First, since best mode disclosure is at least ostensibly still a requirement, if the Patent Office detected an omission of best mode in an application, it could deny the patent. But the Patent Office will seldom have the information to detect such an omission, so this seems a remote likelihood. Second, Congress left open the possibility of a criminal prosecution for egregious violations, but the likelihood of a prosecutor pursuing such charges also seems remote.

Third, and most troubling, this inconsistency places patent attorneys in a difficult ethical position. It may be an ethical violation for an inventor’s attorney to willfully assist in concealing the best mode, since that is required by the statute, but sanctions for such a violation also seem remote. Yet, attorneys could be put in a conflict of interest situation where it is in the client’s best interests to withhold the best mode—and there is no real penalty for doing so—but the attorney’s duty of candor to the Patent Office remains. In its inelegant revision of the statute, Congress may have created a situation in which the interests of the patent attorney and those of her client diverge.

Conclusion

Legislative patent reform can be a costly proposition. Aside from the problem of special interest rent-seeking, the switching costs of adapting common practice to new legislation can be extraordinarily high. The America Invents Act offers a prime example of such switching costs. Although businesses will likely experience somewhat lowered costs in managing international patent filings, the legislation disrupts long settled law, creates new opportunities for gamesmanship, foments new litigation, and introduces new uncertainty into business decisionmaking.

Perhaps ironically, this means that the true business of patent reform is left to the U.S. Patent Office and the courts, where it may have been better to have placed it in the first instance. The many ambiguities and inconsistencies will ultimately be given meaning by judicial interpretation. It will unquestionably take decades of litigation before we know what many of these statutory changes introduced into patent law mean for innovation. The political claim that the AIA will create 200,000 new jobs may well prove to be true, but they will be jobs for patent lawyers. **R**

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