

# PATENTS AND TRADE SECRETS REVISITED

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## Introduction

Patenting and secrecy are the two major methods of protecting technology that supports competitive advantage.<sup>2</sup> While this has been true for decades, the legal landscape in which businesses must choose between them has changed dramatically in recent years, mainly as a result of two forces. The first of these was a series of court rulings that collectively have narrowed the scope of patentable subject matter and have made patents more difficult to enforce. The second was the America Invents Act of 2011 (the “AIA”), which effectively eliminated or reduced certain risks of choosing secrecy, while providing new ways to challenge patents in administrative proceedings. Considered together, these forces require innovators to reconsider their cost/benefit models for evaluating protection mechanisms. This paper discusses risk factors counsel should weigh when advising clients on these issues. I do not advocate one method over the other, but instead suggest that decisions should be guided by clients’ business needs and priorities rather than by patent eligibility alone.

## Traditional Views on Patenting vs. Secrecy

More than forty years ago the U.S. Supreme Court rejected the idea that state common law on trade secrets should be preempted by the federal patent statute. In *Kewanee Oil Co. v. Bicron Corp.*,<sup>3</sup> the Court explained that anyone whose invention clearly qualified under the patent laws would always choose patenting over secrecy.<sup>4</sup> While this was a dubious assumption, a concurring opinion pointed out that Congress had repeatedly amended the patent law without ever questioning its coherence with trade secrets. Nevertheless, popular wisdom among intellectual property lawyers since *Kewanee* has continued generally to hold that patents are strong, secrets are weak, and unless there are good reasons to elect secrecy (such as the difficulty of proving

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<sup>2</sup>Trade secrets protect a wide range of confidential information, ranging from customer lists to strategic plans and business methods. See POOLEY, TRADE SECRETS § 4.02[2] (Law Journal Press 2016, updated semiannually). This paper concerns only protection of technical information that could qualify as patentable subject matter, but which might also be protectable as a trade secret.

<sup>3</sup>*Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 492 (1974).

<sup>4</sup>*Id.* at 490 (“The possibility that an inventor who believes his invention meets the standards of patentability will sit back, rely on trade secret law, and after one year of use forfeit any right to patent protection . . . is remote indeed.”).

infringement of process inventions), patenting is the preferred method when it is available.

Over the years, a fairly sophisticated approach to the issue emerged and began to dictate inventors' preferences. This business-oriented analysis started with the issue of patentability and added more factors to the calculus, including:

1. *Risk of Reverse Engineering.* If the invention cannot be practiced publicly without revealing confidential information, an inventor should patent his invention rather than rely on secrecy.
2. *Projected Period of Commercial Exploitation.* Utility patents expire after twenty years. Some innovations will not provide a competitive advantage for that long, but for those that could remain commercially viable well beyond the patent term, secrecy might be the better choice. And if the technology is likely to become obsolete quickly, it may not be worth the investment to get a patent, or at least to pay maintenance costs for its full term.<sup>5</sup>
3. *Patent Strength.* To the extent that a patent covers the most practical ways of achieving the objectives of the invention, and it would be difficult to “design around” or challenge its validity, it is considered particularly “strong” and therefore the presumptively better choice.
4. *Critical Need to Use the Invention.* Traditionally, choosing secrecy created some risk that a patent would be unavailable to the inventor due to a non-informing public use, or that the first but secret inventor could be blocked by a later patent. A low appetite for such risks has often driven decisions to seek patents.<sup>6</sup>
5. *Procurement and Maintenance Costs.* As a purely financial investment, both methods of protection involve meaningful costs, but they are incurred at different times and in different ways, some of them difficult to identify or allocate.<sup>7</sup> For example, the costs of patent prosecution may be substantial, and a rational choice between protection systems requires projecting what future maintenance costs would be for keeping patent rights in relevant markets. At the same time, while establishing trade secret protection is nominally “free” due to the lack of a comparable registration regime, secrecy implies considerable hidden costs for management of confidential relationships to preserve the right. In addition, there is the cost of litigation, which is serious and unpredictable for both methods of protection.

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<sup>5</sup>Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. ECON. PERSPECTIVES 75, 80 (2005) (“Between 55 and 67 percent of issued U.S. patents lapse for failure to pay maintenance fees before the end of their term . . . , which indicates that these patents are of little value to their owners.”).

<sup>6</sup>See F. Andrew Ubel, *Who's on First?—The Trade Secret Prior User or a Subsequent Patentee?*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 401, 407 (1994).

<sup>7</sup>Andrew Beckerman-Rodau, *The Choice between Patent Protection and Trade Secret Protection: A Legal and Business Decision*, 84 J. PAT. & TRADEMARK OFF. SOC'Y 371, 400-401 (2002).

6. *Patent as Leverage or Message.* Patents are often chosen as a method of protection because they “signal” to competitors that a company is taking a position that should be respected, providing an additional, although vague, level of comfort. Investors and business partners also have traditionally depended on patents to provide a clear and relatively reliable measure of competitive advantage, and this collateral benefit can often be a good reason to choose patenting over secrecy.<sup>8</sup>

I have already noted the two major forces that have combined to challenge the traditional patent/trade secret calculus: judicial decisions making patents more difficult to obtain and enforce, and legislation that has reduced the risk of employing secrecy while arguably reducing the value of patents in general by making their enforceability less reliable. The new calculus takes into account these tectonic shifts in a larger context, in which secrecy has achieved an unprecedented level of attention and importance. We therefore begin our analysis with a brief review of that context.

## **Recent Developments Require a Fresh Look**

### *New Global Emphasis on Secrecy Issues*

Establishment of the TRIPS Agreement in 1995 brought trade secret protection to the international stage.<sup>9</sup> The current wave of business globalization had already begun, and TRIPS made clear that industry could count on some level of respect for trade secret rights in cross-border transactions. The next year the Economic Espionage Act became law.<sup>10</sup> More recently, the U.S. government, partly motivated by reports of high profile cyberhacking and other forms of espionage against American companies, issued a number of reports, strategic plans, and executive orders reflecting a heightened interest by the administration in trade secret enforcement.<sup>11</sup> Naturally, this attitude has been reflected in the major bilateral and regional free trade negotiations to which the United States has been a party.<sup>12</sup> In 2016, Congress passed with almost unanimous support the Defend Trade Secrets Act, providing for the first time a civil

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<sup>8</sup>Sebastian Hoenen et al., *The Diminishing Signaling Value of Patents between Early Rounds of Venture Capital Financing*, 43 RES. POL'Y 956 (2014).

<sup>9</sup>TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 39.

<sup>10</sup>18 U.S.C. §§ 1830, 1831-1839.

<sup>11</sup>See, e.g., OFFICE OF THE NAT'L COUNTERINTELLIGENCE EXEC., FOREIGN SPIES STEALING U.S. ECONOMIC SECRETS IN CYBERSPACE: REPORT TO CONGRESS ON FOREIGN ECONOMIC COLLECTION AND INDUSTRIAL ESPIONAGE, 2009-2011 (2011), available at [http://www.ncsc.gov/publications/reports/fecie\\_all/Foreign\\_Economic\\_Collection\\_2011.pdf](http://www.ncsc.gov/publications/reports/fecie_all/Foreign_Economic_Collection_2011.pdf); Victoria Espinel, *Launch of the Administration's Strategy to Mitigate the Theft of U.S. Trade Secrets*, WHITE HOUSE BLOG (Feb. 20, 2013), <https://www.whitehouse.gov/blog/2013/02/20/launch-administration-s-strategy-mitigate-theft-us-trade-secrets>; U.S. INTELL. PROPERTY ENFORCEMENT COORDINATOR, EXEC. OFFICE OF THE PRES. OF THE U.S., 2013 JOINT STRATEGIC PLAN ON INTELLECTUAL PROPERTY ENFORCEMENT (2013), available at <https://www.whitehouse.gov/sites/default/files/omb/IPEC/2013-us-ipeec-joint-strategic-plan.pdf>.

<sup>12</sup> See, e.g., Article 18.78 of the draft Trans-Pacific Partnership agreement, available at <https://ustr.gov/sites/default/files/TPP-Final-Text-Intellectual-Property.pdf>.

misappropriation remedy under federal law.<sup>13</sup> Meanwhile, the European Union has issued a new Trade Secrets Directive that is expected to lead to a certain level of harmonization among the member states on major issues of definitions and frameworks for civil enforcement.<sup>14</sup> This interest by governments is consistent with industry surveys that show an increased reliance on secrecy over patenting as a means of protecting competitive advantage.<sup>15</sup>

Of course, enforcement activity in actual transactions is at least as important as policy pronouncements, and here the indications are also encouraging for trade secret owners. In *TianRui Group Co. v. ITC*,<sup>16</sup> a recent case involving a trade secret misappropriation occurring entirely in a foreign country, the Federal Circuit held that the International Trade Commission properly exercised its authority under 19 U.S.C. § 1337 to bar importation of products manufactured abroad using the misappropriated secret information. A dissenting opinion by Judge Moore objected to what she viewed as an unjustified exercise in extraterritorial application of U.S. law. Although her analysis focused on whether the statute evidenced a congressional intent to apply extraterritorially, it is notable as well for its prediction that the panel's holding would provide "an additional incentive to inventors to keep their innovation secret," which she felt would in turn "den[y] society the benefits of disclosure stemming from the patent system, which are anathema to trade secrets."<sup>17</sup> While I agree with Judge Moore that robust domestic remedies for foreign theft of secrets can provide some additional encouragement to rely on secrecy, I see that as fully consistent with the Supreme Court's holding in *Kewanee* that trade secret law is complementary to the patent system. After all, the policy goal of the patent law is not disclosure itself but encouragement of invention,<sup>18</sup> and that is also a primary policy behind trade secret law.<sup>19</sup>

### *Trade Secret Anxiety and Risk Reduced by the AIA*

Before passage of the AIA, decisions about secrecy versus patenting could involve some risk relative to patent law. The most obvious of these was the requirement (imposed uniquely in the U.S.) that the applicant disclose the "best mode" of implementing the claimed invention.<sup>20</sup> A failure to comply could result in the patent being held invalid, and so the best mode defense became a common feature of discovery in patent litigation, with the defendant searching for indications that the inventor's thinking had been more precise than was revealed in the application. In

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<sup>13</sup> Pub. L. 114-153, effective May 11, 2016, codified as amendments to the Economic Espionage Act, 18 U.S.C. §§ 1831-1839.

<sup>14</sup> Directive (EU) 2016/943, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016L0943&from=EN>.

<sup>15</sup> See <http://www.nsf.gov/statistics/infbrief/nsf12307/> (R&D-intensive companies reported secrecy as "very important" or "somewhat important" at a rate more than twice that of patenting).

<sup>16</sup> *TianRui Grp. Co. v. Int'l Trade Comm'n*, 661 F.3d 1322 (Fed. Cir. 2011).

<sup>17</sup> *Id.* at 1343 (Moore, J., dissenting).

<sup>18</sup> See *Eldred v. Ashcroft*, 537 U.S. 186, 190 (2003) ("[I]mmediate disclosure is not the objective of, but is exacted from, the patentee . . .").

<sup>19</sup> *Kewanee*, 416 U.S. at 493.

<sup>20</sup> 35 U.S.C. § 112.

effect, the patent applicant had to weigh the disadvantages of too much or too little disclosure, and whatever the decision there would always remain a risk either of facing a best mode defense in litigation, or publication of secrets that could properly have been maintained, or both. This risk was for the most part eliminated by the AIA, which maintains the best mode requirement but declares that it cannot be raised as a defense against infringement. Whatever one might say about the lack of elegance or consistency in this approach to patent reform, these special risks and costs of keeping as secrets certain patent-related information have for most practical purposes disappeared.

The AIA also appears to have benefited trade secret holders by abrogating the so-called “forfeiture doctrine” originally described by Judge Learned Hand in the *Metallizing Engineering* case.<sup>21</sup> The doctrine barred patenting when the inventor had profited from commercial use of the invention for longer than the one-year grace period before filing, even where the use was secret, such that no one could gain access to the invention by inspection of a marketed product. Confirmed in later opinions of the Federal Circuit, this category of “secret prior art” is no longer present in the AIA’s amended § 102(a)(1), which lists the novelty-destroying types of prior art as: matter which was either patented, described in a printed publication, in public use, on sale, “or otherwise available to the public.” The clear implication of the latter phrase, according to most commentators, is that the prior art itself, and not just the things made with it, must be “available to the public.”<sup>22</sup>

Finally, the AIA dramatically broadened the prior user rights defense, which under the American Inventors Protection Act of 1999 had been provided only for business methods, by expanding its application to all technologies.<sup>23</sup> So long as the use began before the filing of the relevant patent application (or before an earlier public disclosure by the applicant during the grace period), this defense will protect one who had made a decision to deploy the technology in secret rather than seek a patent. Although subject to certain limitations,<sup>24</sup> the prior user rights defense is now sufficiently comprehensive that a decision to use secrecy can be made in the comfort of knowing that the activity will almost certainly not be prohibited by virtue of a later-issued patent.

#### *Patent Rights Diminished by Court Decisions and Post-Grant Proceedings*

If trade secret interests are in the ascendancy, the feeling among the IP bar is that patents, if not “under attack,” have been weakened by a combination of a series of court decisions and the effects of the post-AIA procedures for challenging issued patents. First we should consider what the courts have done to the scope of patentability. *KSR* adjusted the standard for obviousness, generally making it easier to

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<sup>21</sup>*Metallizing Eng’g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 519-20 (2d Cir. 1946).

<sup>22</sup>See, e.g., Robert R. Armitage, *Understanding the America Invents Act and Its Implications for Patenting*, 40 AIPLA Q.J. 1, 54 (2012), available at [http://www.uspto.gov/sites/default/files/aia\\_implementation/armitage\\_pdf.pdf](http://www.uspto.gov/sites/default/files/aia_implementation/armitage_pdf.pdf).

<sup>23</sup>See REPORT ON THE PRIOR USER RIGHTS DEFENSE (2012), available at [http://www.uspto.gov/sites/default/files/aia\\_implementation/20120113-pur\\_report.pdf](http://www.uspto.gov/sites/default/files/aia_implementation/20120113-pur_report.pdf).

<sup>24</sup>The right is personal and may not be transferred; it may be exercised only in the places where the technology was in use at the relevant time; and it does not apply to patents held by universities.

challenge validity.<sup>25</sup> *Bilski* made it more difficult to claim business methods.<sup>26</sup> *Mayo* constrained applications for medical dosing techniques.<sup>27</sup> *Nautilus* raised the bar for § 112 definiteness.<sup>28</sup> And *Alice* has called into question the patentability of software inventions.<sup>29</sup> As for enforcement of patent rights, *eBay* substantially reduced the likelihood of getting an injunction.<sup>30</sup> *Sandisk* made it easier to file declaratory relief challenges (and therefore more complicated to engage in licensing discussions).<sup>31</sup> *Seagate* raised the bar for willful infringement.<sup>32</sup> *LaserDynamics* limited application of the “entire market value” theory of damages.<sup>33</sup> *Octane Fitness* injected a much more serious risk of fee-shifting if the patentee turned out to be wrong.<sup>34</sup> Whatever your view about the merits of each of these decisions—or all of them as a group—it should be easy to understand how patent owners, looking back over the past decade or so of court opinions, might be feeling shocked.

And then there is the AIA, which introduced reforms to the patent system that have been widely embraced as increasing efficiency, transparency, predictability, and effectiveness of the nation’s innovation engine.<sup>35</sup> But one aspect of this profound reworking introduced the notion of easier public challenges to issued patents, reflected in the processes for post-grant review of the PTO’s decision to issue a patent.<sup>36</sup> While few would question the inefficiency of putting all validity issues in front of a lay jury for determination, the alternative of sending back patents for re-working to the newly-instituted Patent Trial and Appeal Board—which applies a lower standard of proof and seems to be invalidating many more claims than it sustains—has stirred controversy over whether we have turned the system over to “patent death squads.”<sup>37</sup> Putting aside the rhetoric, we should not be surprised that patent owners feel that the traditional grants of “quiet title” in their inventions have been seriously disturbed, and the value of (at least some of) their patents has been reduced. And this is before considering some of the current proposals for further reform.<sup>38</sup>

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<sup>25</sup>*KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007).

<sup>26</sup>*Bilski v. Kappos*, 561 U.S. 593 (2010).

<sup>27</sup>*Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012).

<sup>28</sup>*Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014).

<sup>29</sup>*Alice Corp. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014).

<sup>30</sup>*eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006).

<sup>31</sup>*SanDisk Corp. v. STMicroelectronics, Inc.*, 480 F.3d 1372 (Fed. Cir. 2007).

<sup>32</sup>*In re Seagate Tech., LLC*, 497 F.3d 1360 (Fed. Cir. 2007).

<sup>33</sup>*LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51 (Fed. Cir. 2012).

<sup>34</sup>*Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014).

<sup>35</sup>See Armitage, *supra* note 21, at 4-9.

<sup>36</sup>For a straightforward and concise description of the Inter Partes Review, Post Grant Review, and Covered Business Method programs, see U.S. PAT. & TRADEMARK OFFICE, MAJOR DIFFERENCES BETWEEN IPR, PGR, AND CBM, [www.uspto.gov/sites/default/files/ip/boards/bpai/aia\\_trial\\_comparison\\_chart.pptx](http://www.uspto.gov/sites/default/files/ip/boards/bpai/aia_trial_comparison_chart.pptx) (last visited Oct. 9, 2015).

<sup>37</sup>See Peter J. Pitts, “Patent Death Squads” vs. Innovation, WALL ST. J. (June 10, 2015), <http://www.wsj.com/articles/patent-death-squads-vs-innovation-1433978591>.

<sup>38</sup>See, e.g., PATENT Act—Protecting American Talent and Entrepreneurship Act of 2015, S. 1137, 114th Cong. (2015-2016) (requires more specific pleadings and disclosures); STRONG Patents Act of 2015, S.632, 114th Cong. (2015-2016); Shield Act—Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013, H.R. 845, 113th Cong. (2013-2014) (if passed, would permit a patent

## Practical Implications

I do not believe that the patent system is in crisis. Any transition to accommodate fundamental reforms will be (and especially will feel to rights holders) profoundly disruptive. But pendulums swing, and systems operating in tension usually return to stability. It should be no surprise, for example, that early PTAB decisions were statistically slanted towards invalidity, because the structural change suddenly addressed a backed-up inventory of questionable claims that previously could only have been challenged in federal courts. We should be patient and allow the new framework to adapt.

That said, the cumulative effect of all of the recent changes is substantial and undeniable. Even though we are in the early stages of adaptation, innovators need to pause and consider the ways in which these shifts are likely to affect their immediate interests and their long-term strategies.

The first point to hold in mind is that the question is not binary. It is not so much “patents *versus* secrets,” but “patents *and* secrets.” Both systems can provide benefits to the enterprise looking to profit from its innovative work. Patents remain uniquely valuable as a way to protect the competitive advantage of innovation, including through their “signaling” function. And secrets, while clearly essential to the protection of recipes, processes and transient facts, remain, as the *Kewanee* court said they were, relatively weak and risky. Moreover, trade secret protection is not “free” just because there are no filing fees. Maintaining a program of secrecy includes significant overhead costs for managing confidential relationships with employees, customers, suppliers, and other partners.

Second, the process of choosing one method over the other is dynamic, not just because the law is in a state of flux, but primarily because of the business conditions that should influence the decision. These include the international aspects of intellectual property protection, the nature of the relevant assets (information-based assets like data analytics favor trade secret protection over invention-based assets), and the behavior of relevant markets (fast-moving markets may make it more difficult to recoup the cost of patenting and to justify teaching the competition). As in many other areas of modern business, breaking old habits and challenging assumptions can be very productive.

Third, there is at least one way to buy time to address inventions that do not obviously fit into a clear decision model for patenting or secrecy. So long as you can accept the constraint of patent protection only in the U.S., it may be advantageous to file

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defendant to move early in a lawsuit to designate a patentee a non-practicing entity and to stay civil discovery while the motion is resolved). *See also Senator Grassley Introduces Major U.S. Patent Reform Bill Different from House Bill*, INTELL. PROP. OWNERS ASS'N (Apr. 30, 2015), [https://www.ipo.org/index.php/daily\\_news/april-30-2015/](https://www.ipo.org/index.php/daily_news/april-30-2015/) (reviewing the PATENT Act).

a provisional application together with a certification of intent not to file for foreign protection,<sup>39</sup> which will allow the application (including any subsequent non-provisional) to remain unpublished during the examination process. This approach effectively returns the applicant to the situation that applied generally before eighteen-month publication was introduced in 1999, so that, if at any time before allowance it is determined that the matter would be more productively maintained as a trade secret, the application can be withdrawn.

Fourth, irrespective of the decision to use secrecy or patenting for a particular innovation, there is now a greater need to pay attention to how information assets are managed. As I have already noted, confidential information—including unpublished patent applications—constitutes the majority of most companies' asset base. This is evanescent property and requires special management focus to protect its integrity, whether it is held as a secret or matures into a patent. Indeed, it is something of a dilemma that in the age of global collaborations and "open innovation" this extraordinarily valuable, vulnerable property must be shared with outsiders who are sometimes located in countries with less-than-robust intellectual property regimes. The security challenge grows with the complexity of a company's sharing network, and now that we are in a first-to-file environment, it has become more important that organizations police their confidential relationships for leaks, maintain scrupulous records of invention activity, and monitor published patent applications by collaboration partners, to identify claims that may have been improperly derived from the collaboration.

## **Conclusion**

Deciding whether to choose secrecy or patenting (or both) used to be a fairly straightforward exercise; or at least we all assumed it was. The framework has now shifted dramatically, not only because of changes in the law, but also because the global business environment is much more complex. The good news is that along with increased risks come new opportunities for developing creative strategies that can leverage the value of our clients' most important assets.

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<sup>39</sup>See 35 U.S.C. § 122(b)(2)(B).