High Stakes Sleuthing: Handling Corporate and IP Espionage Matters in the Information Age

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Introduction

Having prosecuted and defended IP cases domestically and internationally, and conducted internal investigations for clients to both prosecute and defend espionage and misappropriation charges, I have developed some interesting perspectives and learned some valuable legal and policy lessons. This chapter is meant to share some of those insights in the context of the changing law and policy that has shaped (and is shaping) those insights.

Our global economy has entered the Information Age. Now, technological information is the "currency of the new millennium." But with the stroke of a computer key, technology that took years and millions of dollars to develop can be stolen and sent to commercial and political competitors around the globe. Recognizing the national economic benefits of the technology trade secrets of US-based companies, and the ease with which these secrets can be stolen, the US Congress enacted the Economic Espionage Act in 1996.

Historically, companies that were victims of IP theft were relegated to the civil justice system with its more limited and expensive remedies. However, the recent trend of foreign governments and companies using the purloined inventions and innovations of US-based companies to compete has caused significant economic harm to the United States.[1] For example, the US International Trade Commission (ITC) reports that US-like IP protections in China could create up to 2.1 million new US jobs, created by increased sales, royalties, lost profits, and relief from downward pricing pressure created by infringing products.[2] The US Computer Crime and Intellectual Property Section of the Department of Justice (CCIPS) reported in 2006 that intellectual capital makes up more than one-third the value of US companies, and that IP theft costs US companies well over $250 billion annually.[3] These numbers have assuredly increased. Also, the US government has equated our country's economic security with its national

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[1] Justin Scheck & Evan Perez, *FBI Traces Trail of Spy Ring to China*, Wall St. J., Mar. 10, 2012 (charging former DuPont employees in "decade-long plot to steal DuPont Co. corporate trade secrets and sell them to a Chinese government-owned company.").

[2] *See* U.S. INT'L TRADE COMMISSION, USITC PUB. 4226, CHINA: EFFECTS OF INTELLECTUAL PROPERTY INFRINGEMENT AND INDIGENOUS INNOVATION POLICIES ON THE US ECONOMY (2011) (*cited in* Matthew J. Slaughter, *China, Patents and US Jobs*, Wall St. J., June 6, 2011).

[3] U.S. DEP'T OF JUSTICE, CRIMINAL DIVISION, COMPUTER CRIME AND INTELLECTUAL PROPERTY SECTION, PROSECUTING INTELLECTUAL PROPERTY CRIMES (3d ed. 2006).

security, making economic and IP espionage a priority for the US government, and in the process, revealing some of the shortcomings of the civil IP legal system to remedy these international violations.

This chapter explores how to effectively work with your corporate client to manage both civil and criminal investigations and prosecutions, and some of the issues and lessons learned from various investigations handled for clients. These matters are almost always a learning experience for the company, as they should be. And they sometimes lead back to the first fundamental question in any IP portfolio audit: should you protect your ideas and information with patents or trade secrets, or both? So that is where we begin.

Patent versus Trade Secret Protection: Protective Synergies Beyond *Bilski*

Copyright, trademark, and trade dress laws protect names, brands, packaging, and expressions of original ideas and thoughts. Patents and trade secrets protect ideas, information, and research and development. Sometimes it is easy to determine when patent protection is preferable to trade secret laws in protecting the value of information or an idea. Other times the question is closer. And choosing incorrectly could be a disaster—publishing trade secrets in a patent application that fails patentability standards will vitiate any trade secret protection because the information is no longer secret. Two recent court decisions, and new Patent Act and Dodd Frank provisions relating to financial business methods, discussed below, have made this decision calculus a bit trickier as it pertains to business methods. *Compare Bilski v. Kappos*[4] (finding hedging algorithm model for trading commodities to be an unpatentable abstract principle),[5] *with U.S. v. Aleynikov*[6] (reversing theft of trade secrets conviction of Goldman Sachs trader convicted of stealing source code for a high speed trading program based on algorithms), *with* Section 18 of the America

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[4] 130 S Ct. 3218 (U.S. 2010).

[5] *See also Mayo Collaborative Svcs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (U.S. Mar. 20, 2012) (finding claimed medical process that determines whether dosage level of drug is too high or too low is not patentable because the process involves routine, conventional medical activity that merely describes a law of nature without describing a sufficient application of the law of nature).

[6] 2012 WL 506071 (2d Cir. Feb. 16, 2012); 2012 WL 1193611 (2d Cir. Apr. 11, 2012).

Invents Act[7] (mandating special post-grant review proceedings for covered financial business method patents), *with* SEC Form PF (requiring fund advisers to disclose to the SEC proprietary and trade secret management and investment methods).[8]

Before turning to some of the highlights and caveats of business method patents under *Bilski*, the America Invents Act, and the civil and criminal protections against and remedies for stolen business method trade secrets, it may serve useful here to point out some of the obvious differences between patent and trade secret protection, followed by the relatively common protective mechanisms for each:

Patents	Trade Secrets
No criminal penalties for infringement	Criminal penalties for misappropriation (discussed *infra*)
No secrecy requirement	Must keep secret
Right to exclude others from making or selling patented items	Right to prevent others from using trade secrets as long as secrets kept and no one else independently develops or reverse engineers them
Must file with patent office in every country in which you seek exclusivity	No filing requirement
Protections and remedies arguably being limited	Broad remedies for misappropriation
Once issued protection is complete until expiration	Must continue to ensure reasonable efforts to maintain secrecy and there is economic value in the item's

[7] HR 1249, § 18 (America Invents Act).

[8] The SEC acknowledges the sensitivity and value of this trade secret information and includes confidentiality provisions and data tracking technology to trace any leaks.

Patents	Trade Secrets
	secrecy
Published know-how not protected if not covered by the patent	Collateral know-how of patents can be protected
Federal Circuit narrowly construes extraterritorial jurisdiction of US patent law in US International Trade Commission (ITC) proceedings	Federal Circuit more broadly interprets extraterritorial jurisdiction of US trade secret laws in ITC proceedings[9]
An industry must exist in the US for infringing products that a plaintiff seeks to bar importation of in an ITC proceeding	The ITC can apply a more flexible "realities of the marketplace" test when determining an industry for products containing purloined trade secrets[10]

Common Mechanisms for Protecting and Securing Patents and Trade Secrets

Adequate internal controls are important in protecting access to and disclosure of trade secrets and developing patent claims. Some common tools employed include:

- Non-competition agreements
- Non-disclosure agreements
- Non-solicitation agreements
- Company network and computer agreements and access restrictions
- Assignment of inventions agreements
- Joint development agreements
- Controlled R&D networks and development versions
- Controlled source code repositories and Wiki sites
- Control access of laptops, external drives, cameras, scanners, recording devices, etc.

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[9] *See Tianrui Group Co. v. ITC*, 661 F.3d 1322 (Fed. Cir. 2011) and discussion *infra*.
[10] *See id.*

The Supreme Court recently considered inventor rights under assignment-of-inventions agreements. In *Stanford Univ. v Roche Molecular Sys., Inc.*,[11] the Court determined ownership rights to a patent developed by a university researcher doing work at a private company on an idea funded by the US government. The Court held that the Bayh-Dole Act—which gives certain licensing rights to the government in inventions it funds—did not automatically vest title in the university being funded by the government, and that the researcher who actually invented the patent could assign the rights to the patent to the company with which the university researcher was working to develop the patented idea. In other words, the university researcher could assign away the university patent rights to an invention that taxpayers paid the university to fund. The Court's opinion highlights the importance of protecting and delineating IP ownership rights in federally funded (or any) research project by using well-drafted and unambiguous ownership and assignment agreements. The Court's decision also stokes the policy debate between commercial protection of IP on the one hand, and on the other hand sharing publicly funded inventions for the public good.

Congress and the USPTO React to Bilski and Business Method Patents

Business Method Patents Barely Survive *Bilski* Based in Part on Congress' Definition of "Method" in Section 273(a)(3) of the Prior Use Provision of the Patent Act—Which Congress Promptly Changed After *Bilski*

In *Bilski v. Kappos*,[12] the US Supreme Court voted 9-0 that the mathematical model for hedging commodity trades was too abstract a process to be patented, and that the machine-or-transformation test is not the sole test for patentability. What is more interesting about the *Bilski* opinion is the 5-4 vote that business method inventions are not categorically unpatentable as a "process" under Section 101 of the Patent Act, as long as they meet all of the requirements of the Patent Act: the invention is a process, article of manufacture, machine, or composition of matter (Section 101), is novel (Section 102), is non-obvious (Section 103), and is fully and particularly described (Section 112).[13] The point is that business methods barely survived being categorically stricken from patentability.

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[11] 131 S. Ct. 2188 (2011).
[12] 130 S. Ct. 3218 (2010).
[13] *See id.* at 3229.

As textual support for its holding that Congress intended a "process" in Section 101 to include business method patents, the Supreme Court in *Bilski* pointed to Section 273, which provided prior use defenses to allegations of infringement of a "method in a patent." Section 273(a)(3) specifically defined "method" as "a method of doing or conducting business."[14] The Court opined that "[a] conclusion that business methods are not patentable in any circumstances would render § 273 meaningless."[15]

After *Bilski* was decided, Congress enacted the America Invents Act (AIA), which removed the definition of "method" from Section 273 upon which the Supreme Court relied in part to find business methods a patentable subject matter.

The America Invents Act Removes From Section 273 the Definition of "Method" Upon Which the *Bilski* Court Relied and Enacts a Separate Special Post Grant Review Provision for Financial Business Method Patents

Section 5 of the America Invents Act (AIA), effective September 16, 2011, amended Section 273 of the Patent Act to remove the definition of method and any reference to business method patents. At first blush, it would appear this amendment removed the anchor of the *Bilski* Court's narrow 5-4 decision not to categorically exclude business methods from patentability. However, this interpretation is countered by two things: the congressional intent with this amendment was to broaden prior use rights beyond business methods, which does not relate to patentability of a business method under Section 101, and Congress in the AIA enacted Section 18, entitled "Transitional Program for Covered Business Method Patents," which is a special post-grant review process for challenged business method patents on financial products and services.

Section 18 was made part of the AIA as part of an amendment offered by Senator Charles Shumer (D-NY) and instructs the USPTO to establish, on or before September 16, 2012, a special transitional post-grant review process for "covered business method patents," defined for the first time in the Patent Act as follows:

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[14] *See id.* at 3228 (quoting 35 USC 273(a)(3), *amended by* H.R. 1249 § 5 (America Invents Act)).
[15] *Id.*

> For purposes of this section, the term "covered business method patent" means a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions.[16]

Section 18(d)(2) instructs the USPTO to issue regulations "for determining whether a patent is for a technological invention."[17]

The USPTO Issues Proposed Regulations Governing Post Grant Review of Financial Business Method Patents But Does Not Mention *Bilski*

On February 10, 2012, the USPTO issued two proposed rules carrying out the congressional mandate of Section 18 of the AIA that will be added in a new subpart D to 37 CFR part 42: 1) procedures by which the Patent Trial and Appeal Board will conduct transitional covered business method patent review proceedings;[18] and 2) a definition to determine when a patent is a "technological invention" in a transitional post-grant review proceeding for covered business method patents.[19] The proposed rules take effect on September 16, 2012. Public comment must be received on or before April 10, 2012.

The proposed rule for post-grant review proceedings adopts the definition of "covered business method patent" set forth in Section 18(d)(1) of the AIA, and adds requirements for specific trial procedures, standing, and the timing of and content for petitions. The proposed definition for "technological invention" for covered business method patent review proceedings is as follows:

> In determining whether a patent is for a technological invention solely for purposes of the Transitional Program for Covered Business Methods, the following will be considered on a case by case basis: whether the claimed subject matter as a whole recites a technological feature that is novel and

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[16] H.R. 1249, § 18(d) (American Invents Act) (emphasis added).
[17] H.R. 1249, § 18(d)(2).
[18] *See* Changes to Implement Transitional Program for Covered Business Method Patents, 77 Fed. Reg. 7080 (proposed Feb 10, 2012) (to be codified at 37 CFR pt. 42).
[19] *See* Transitional Program for Covered Business Method Patents — Definition of Technological Invention, 77 Fed. Reg. 7095 (proposed Feb. 10, 2012) (to be codified at 37 CFR pt. 42).

> unobvious over the prior art; and solves a technical problem using a technical solution.[20]

As suspected given the relatively narrow scope of the USPTO's charge in the AIA, the regulations on their face do not affect the patent-eligibility inquiry of business method patents under Section 101. Indeed, neither proposed rule even mentions *Bilski*. However, it will be interesting to see how the district courts and Federal Circuit handle the eligibility analysis of business method patents after Congress stripped Section 273 of the "method" definition upon which the Supreme Court relied in divining an intent by Congress not to categorically bar business method patents from patent eligibility. Does the new Section 18—a post-grant review process for only financial business method patents—reveal a similar intent? Or is this simply a provision to protect the financial services industry from patent-infringement suits by "holders of 'business method' patents that should never have been granted by the patent office in the first place."[21] Stay tuned.

Because the AIA on its face did not expressly affect the patent-eligibility analysis for business method patents after *Bilski*, the USPTO's interim guidance on applying the standards in *Bilski* to business method patent applications remains intact.

After *Bilski* the USPTO Issues "Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of *Bilski v Kappos*"[22]

One month after the Court decided *Bilski*, the USPTO issued interim guidance for examiners to use to apply *Bilski* when determining subject matter eligibility under Section 101.[23] Because on its face the AIA did not purport to affect the patentability of business methods after *Bilski*—despite removing the statutory anchor of the 5-4 majority on the issue—the USPTO's interim guidance is still relevant. The guidance sets forth an outline of factors to consider when determining whether a business method is an abstract principle precluding patent eligibility. The "Quick Reference Sheet" at the end of the guidance summarizes the factors weighing toward and against patent eligibility for business methods:

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[20] *Id.* at 7108.
[21] Andrew Ross Sorkin, *In a Bill, Wall Street Shows Its Clout*, NY Times, July 4, 2011.
[22] 75 Fed. Reg. 43922 (July 27, 2010).
[23] *Id.*

Factors Weighing Toward Eligibility

- Recitation of a machine or transformation that is particular, meaningfully limits execution of the steps, and implements the claimed steps.
- The article being transformed is particular, undergoes a change in state or thing, and is an object or substance.
- The claim is directed toward applying a law of nature, the law of nature is practically applied, and the application of the law of nature meaningfully limits the execution of the steps.
- The claim is not a mere statement of a concept in that if describes a particular solution to a problem to be solved, implements a concept in some tangible way, and the performance of the steps is observable and verifiable.

Factors Weighing Against Eligibility

- No or insufficient recitation of a machine or transformation
- The claim is not directed to an application of a law of nature
- The claim is a mere statement of a general concept, which include but are not limited to:

    - Basic economic practices or theories (e.g., hedging, insurance, financial transactions, marketing)
    - Basic legal theories (e.g., contracts, dispute resolution, rules of law)
    - Mathematical concepts (e.g., algorithms, spatial relationships, geometry)
    - Mental activity (e.g., forming a judgment, observation, evaluation, or opinion)
    - Interpersonal interactions or relationships (e.g., conversing, dating)
    - Teaching concepts (e.g., memorization, repetition)
    - Human behavior (e.g., exercising, wearing clothing, following rules or instructions)
    - Instructing "how business should be conducted"

In *Fort Properties, Inc. v. American Master Lease, LLC*,[24] the Federal Circuit applied these *Bilski* factors and found too abstract a patent for a method of aggregating and selling real estate interests to investors that allow structuring of debt to permit tax free exchanges. The court found that merely connecting a real estate investment tool to the physical world "through deeds, contracts, and real property" cannot transform an abstract concept into patentable subject matter.[25] The court also found the computer limitation that was added to certain claims did not impose "'meaningful limits on the claim's scope'" and was "simply [an] insignificant post-solution activity."[26] After *Bilski* and *Fort Properties*, it can be argued that the more integral complex computer processes or algorithms are to the business method, the more likely it is that lower courts and Federal Circuit will find it patentable. In other words, the more closely tied the method is to a machine, the better its chances of patentability.

In *Mayo Collaborative Svcs. v. Prometheus Labs., Inc.*,[27] the US Supreme Court referenced its decision in *Bilski* when it reversed the Federal Circuit's finding that a claimed medical process was patentable because it sufficiently described an *application* of a law of nature under the machine or transformation test. The patent claims described a process that helped doctors determine whether dosage levels of thiopurine drugs were too high or too low in patients with autoimmune diseases. The Supreme Court held that the claimed processes did not describe a *sufficiently significant application* of the natural laws attendant to the relationship between levels of the thiopurine drugs in the blood and whether the level of the thiopurine drugs will be effective or induce harmful side effects:

> [T]he steps in the claimed processes (apart from the natural laws themselves) involve well-understood, routine, conventional activity previously engaged in by researchers in the field. At the same time, upholding the patents would risk disproportionately tying up the use of underlying natural laws, inhibiting their use in the making of future discoveries.[28]

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[24] 2012 WL 603969 (Fed. Cir. Feb. 27, 2012).
[25] *See id.* at *5.
[26] *Id.* at *6 (quoting *Cybersource Corp. v. Retail Decisions, Inc.*, 654 F3d 1366, 1375 (Fed. Cir. 2011)).
[27] 2012 WL 912952 (Mar. 20, 2012).
[28] *Id.* at *5.

Civil Legal Protections and Remedies for Trade Secrets

Defining a Trade Secret

> A trade secret is really just a piece of information (such as a customer list, or a method of production, or a secret formula for a soft drink) that the holder tries to keep secret by executing confidentiality agreements with employees and others and by hiding the information from outsiders by means of fences, safes, encryption, and other means of concealment, so that the only way the secret can be unmasked is by a breach of contract or a tort.[29]

Information is a trade secret if (1) the information derives actual or potential economic value from not being known or readily ascertainable by the public, and (2) the owner uses reasonable efforts to maintain the information's secrecy. The term "trade secrets" can apply to the following types of information: various forms of financial, scientific, technical, economic, or engineering information; plans, patterns, program devices, formulas, designs, prototypes, codes, processes, methods, techniques; "negative know-how"—time and money spent learning what does not work; secret combinations of otherwise public elements or processes; tangible or intangible materials.

The following are generally not trade secrets: general information or knowledge an employee obtains over the course of his career; general information or knowledge in a certain industry; independent development of an idea by someone else; "reverse engineering" a publicly available product to discover a design or method; publicly available information; information that the owner does not exercise reasonable efforts to keep secret; and information that derives no value from its secrecy.

Civil Protection of Trade Secrets Is a Creature of State Law

Plaintiffs bringing claims in the US courts for trade secret misappropriation bring those claims under a patchwork of legal theories and bases, including

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[29] *ConFold Pac. V. Polaris Indus.*, 433 F.3d 952, 959 (7th Cir. 2006) (Posner, J.).

tort, contract, and statute. Most states have enacted some variation of either the Uniform Trade Secrets Act (UTSA) or the Restatement 2d of Torts, coupled with interpretive case precedent. A typical state statute following the UTSA makes it unlawful to use "improper means" to "misappropriate" a "trade secret," with each of the quoted terms defined.[30] The UTSA also permits injunctive relief for "actual or threatened misappropriation" of trade secrets.[31] Damages are permitted in the form of both actual loss and unjust enrichment, including imposition of a reasonable royalty for unauthorized use or disclosure of a trade secret.[32] A punitive award of attorney fees can be awarded if plaintiff makes a bad faith claim of misappropriation, a defendant is found to have "willfully and maliciously" misappropriated a trade secret, or a defendant resists an injunction in bad faith.[33] Courts are authorized to issue protective orders to preserve secrecy of the trade secret during the litigation.[34] Plaintiffs must bring a misappropriation claim within three years of the misappropriation being discovered or when it should have been discovered using reasonable diligence.[35] The UTSA does expressly displace tort and other civil remedies based upon misappropriation of the trade secret, but it expressly does *not* displace contract claims or criminal remedies "whether or not based upon misappropriation of a trade secret."[36]

Common defenses to trade secret misappropriation include:

- The defendant independently developed the trade secret, or independently discovered the information comprising the trade secret
- Defendant's reverse engineering revealed the trade secret
- Defendant had a good faith belief that he had a right to use the information because it was in the public domain or because it belonged to the defendant
- The defendant disputes that the plaintiff owns the trade secret
- The trade secret is general knowledge in the industry

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[30] *See, e.g.*, MCL 445.1902 (Michigan's Uniform Trade Secret Act tracking section 1 of the UTSA).
[31] *See* MCL 445.1903; UTSA § 2.
[32] *See* MCL 445.1904; UTSA § 3.
[33] *See* MCL 445.1905; UTSA § 4.
[34] *See* MCL 445.1906; UTSA, § 5.
[35] *See* MCL 445.1907; UTSA § 6.
[36] MCL 445.1908; UTSA § 7.