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Transparency

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ABSTRACT

The patent regime is a quintessential notice system. Implicit in its design is the concept that one attempting to license a patent can identify those who hold the requisite rights and the territory that the patent holders claim. The modern system, however, bears little resemblance to the idealized form.

In the last decade, an entire Hobbit's world has been created under the foliage with little information available to inform the market. To address the problem, this Article suggests borrowing from doctrines related to disclosure in the realm of corporate securities, molding those doctrines to particular patent concerns.

As a government grant, bestowed for constitutional purposes, a patent is an asset imbued with the public interest. Analogous to the trading of public securities, the trading of patent assets must be sufficiently transparent to ensure proper functioning of that trading market.

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I. INTRODUCTION

The United States patent system in recent years has strayed far from the ideal reflected in its initial design. Crafted according to consequentialist notions of promoting the progress of the useful arts and utilitarian notions of maximizing that good, the patent system is quintessentially a notice system. Society provides strict liability for making, using, or selling a patented invention, in anticipation that all those who wish to do so are on notice by virtue of the grant and publication of the patent. Implicit in the patent system's structure is the concept that one attempting to license a patent can identify those who hold the requisite rights, as well as being able to identify the territory that the patent holders claim as their own.

In the quaint image embodied in the system's design, one who wishes to manufacture a product can peruse the U.S. Patent & Trademark Office's (PTO) files of active patents, identify any rights that might be implicated by the creation of the product, and appear on the patent holder's doorstep, hat in hand. One is not guaranteed a license—withholding a patent is the patent holder's prerogative, and the modern Patent Act underscores this latitude by specifying that failure to work the patent does not constitute patent misuse. Nevertheless, participants in the process are not expected to dance in the dark.

As the system has evolved, however, it bears little resemblance to the idealized form. Scholars have identified systemic problems that prevent the system from realizing the ideal represented in its design. In particular, numerous scholars have written about flaws in the notice system that are attributable to the vast number of active patents and the lack of predictability in decision-making by federal circuit courts. In addition, this author has written from a theoretical perspective about the impossibility of predicting *ex ante* the scope of any

particular patent, given the lack of a societally shared conception for things that are new, the difficulties inherent in language, and the impossibility of anticipating those yet uncreated inventions to which the patent language will be compared during the life of the patent.[1]

Only recently, however, have scholars begun to address problems related to transparency of ownership within the modern patent system, largely because these problems have sprung up so recently.[2] In particular, over the last five-to-seven years, an entire Hobbit's world has been created under the foliage, a world in which sunshine rarely penetrates.

The notion of transparency could include a wide variety of information, from licenses granted to valuation information. All such information arguably could promote more efficient bargaining in the market for patent monetization. This Article, however, focuses on one, limited aspect of transparency—that is, information related to those who have a financial interest in the patent. Identifying those interests can provide a small, but essential, step in ensuring the communication of sufficient knowledge for the players in the field.

Even this limited idea is not without controversy. In opposition to notions of transparency, one aggregator has argued that even basic ownership structure should be private—let alone information about beneficial interests. At an FTC/DOJ Workshop on patent assertion entities in 2012, a

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[1] *See* ROBIN FELDMAN, RETHINKING PATENT LAW 13–23 (2012).

[2] For interesting explorations of transparency and modern ownership issues, see JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE (2008); Mark Lemley & Nathan Myhrvold, *How to Make a Patent Market*, 36 HOFSTRA L. REV. 257 (2008); Peter S. Menell & Michael J. Meurer, *Notice Failure & Notice Externalities,* 5 J.L. ANALYSIS 1 (2013); Michael Risch, *Patent Portfolios as Securities*, 63 DUKE L.J. 89 (2013).

representative of aggregator Intellectual Ventures argued the following:

> We spend a lot of money and a lot of effort figuring out where to invest. And we don't feel like tipping our hands on our investment policies and our investment intentions to our competitors. Warren Buffett doesn't tell people where he's investing until he's forced to when he's practically ready to take over a company. Disney doesn't tell people when it[']s buying swamp land in Florida that, hey, we're planning to put a theme park over there.[3]

It is certainly true that secrecy in business transactions can have tremendous value for those who hold information that others in the market do not have. The question, of course, concerns the societal costs and benefits. The modern conception of a properly competitive market looks to the benefits for competition as a whole, not to the benefits for individual competitors. In a competitive environment, economists generally believe that information is a positive attribute and information asymmetries lead to market imperfections and distortions.

As trading in patents develops into a more sophisticated and fluid market, society should think carefully about how that market functions. This is particularly appropriate in the case of

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[3] Fed. Trade Comm'n & U.S. Dep't of Just., Patent Assertion Entity Activities Workshop Transcript 62–63 (Dec. 10, 2012), *available at* http://www.ftc.gov/sites/default/files/documents/public_events/Patent%20Assertion%20Entity%20Activities%20Workshop%20/pae_transcript.pdf.

patents, which are government-granted grants. One would be hard pressed to argue that society should tailor a system of government grants in a way that encourages information asymmetries.

In addition to the notion of properly functioning markets, the information asymmetries implicated in the Walt Disney analogy are particularly problematic for a system intended to create incentives for inventors. As a Justice Department staff member noted, the Disney analogy implies that in the current environment, unsuspecting inventors will be under-compensated.[4] Processes that take advantage of and dupe the small inventor are hardly consistent with the goals of the patent system.[5] In short, from a societal perspective, stealth is not valuable to the patent system. Rather, stealth plays much to its detriment.

This Article considers in depth the problem of transparency as a general matter and transparency of ownership in particular in modern patent law. Part II provides background on the patent system, from both a theoretical and a descriptive perspective, highlighting the patent system's animating logic and the potential gaps between that logic and the system's design. Part III describes the fact that scholarly discussions of notice concerns have focused largely on governmental actors and their role in ensuring that a patent can be properly understood and interpreted. In contrast, this Part argues that market information is an important element of the notice function of patents. One can think of the mechanisms for providing that market information broadly as "Transparency."

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[4] *Id.* at 64.
[5] *Id.* at 65.

To address transparency insufficiency, one need not write on a blank slate. Part IV suggests a framework adapted from disclosure in the realm of corporate securities. In particular, this Article suggests borrowing from the substantial body of well-developed doctrine and literature associated with Section 16 of the Securities Exchange Act, which is used for disclosure of interests in corporate securities. Part IV then explores the way in which these doctrines could be molded to the concerns in patent law.

Application of corporate securities disclosure law to patents is particularly appropriate in light of the analogous public interest. The public interest in securities disclosure rests with the publicly traded nature of the organization and society's interest in a fair and optimally functioning stock market.

With patents, the asset itself is imbued with public interest by virtue of the fact that a patent is a government grant, bestowed only for purposes enshrined in the Constitution itself. As with the trading of public securities, the trading of an asset imbued with the public interest must be sufficiently regulated to ensure proper functioning of that trading market.

II. WHY TRANSPARENCY IN GENERAL?

One must begin by asking whether any form of transparency is a useful or necessary element for the patent system. Businesses frequently prefer not to disclose information, and there are certainly circumstances in which society erects barriers to protect commercial silence, particularly within the realm of intellectual property. For example, patent's sister regime, trade secret, is entirely premised on the value of commercial secrecy, and the accompanying doctrines are dedicated to protecting that

silence. Copyright also has aspects of tolerating and even protecting non-communication. For example, un-communicated writings can receive even greater protections in copyright than those that are published. Moreover, the modern copyright system no longer requires any semblance of notice or publication, having abolished both notice and deposit requirements in the 1980s.[6] In other words, one need not make certain that the world has access to one's original writings in order to protect those writings under copyright.

In contrast to trade secret and copyright, however, the patent system traditionally has emphasized values such as notice, openness, and disclosure—areas that are related to transparency. In order to develop a deeper exploration of what transparency is and what aspects might be desirable for patents, this Article begins by looking at the theoretical concepts underlying the patent system.

In the historic, theoretical framework of the American patent system, patents are a limited government grant. From the store of those things that might otherwise be available to all, society dedicates a portion to the province of the few, in hopes that the benefit will redound to society as a whole.[7] The portions dedicated are limited in both time and scope, with the footprint of the patent restricted to the incremental contribution that the patent holder has made to society.

One could construct a theoretical framework for intellectual property rights based on the natural or inherent

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[6] S. REP. NO. 100-352 (1988), *reprinted in* 1988 U.S.C.C.A.N. 3706.
[7] Robin Feldman, *Intellectual Property Wrongs*, 18 STAN. J.L. BUS. & FIN. 250, 252–53 (2013). These benefits include, among others, promoting innovation, encouraging the production of quality goods, and maintaining an appropriately functioning marketplace.

rights of the inventor. Similar frames can found in scattered pre-constitutional colonial history, as well as in certain corners of modern intellectual property rights of foreign nations. From at least the moment that intellectual property was enshrined in constitutional language, however, the American system of intellectual property in general, and patents in particular, has been decidedly utilitarian.[8] According to this framework, society grants time-limited rights for the specific purpose of bringing about a particular societal consequence. In the case of patents, of course, that consequence is described as promoting the progress of the "useful [a]rts."[9]

This consequence-based approach is critical for understanding the patent system. Although some popular commentary may wax poetic on the rights of the valiant inventor, the system is designed with larger societal goals in mind.

In pursuit of these goals, the patent regime is a communicative system, an approach evident throughout its language and design. Even the vernacular of patent law exudes its communicative function. In discussing a particular patent, for example, one speaks in terms of what the patent "teaches," and one asks whether the patent "reads on" a particular accused device.

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[8] For a detailed explanation of consequentialist versus rights-based jurisprudence and a description of how these concepts play out in the American patent system, see FELDMAN, *supra* note 1, at 76–78. *See also* Robin Feldman, *Consumption Taxes and the Theory of General and Individual Taxation*, 21 VA. TAX REV. 293 (2002) (explaining consequentialism and nonconsequentialism in the context of the philosophical roots of modern tax theory); Adam Mossoff, *Who Cares What Thomas Jefferson Thought about Patent? Reevaluating the Patent "Privilege" in Historical Context*, 92 CORNELL L. REV. 953 (2007).

[9] U.S. CONST. art. I § 8, cl. 8.

The design of the patent regime evidences the system's communicative function. The powerful patent right is granted only in exchange for revealing to society the details of one's innovation, details that will be free for all to use at the conclusion of the patent term. Tremendous judicial and jurisprudential energy is devoted to the question of ensuring that sufficient information is disclosed to justify granting patent protection to the inventor. In addition, the patent regime is quintessentially a notice system. As with its evolutionary ancestor, real property, the patent system is designed to provide notice to all of the boundaries of what is claimed in any particular patent. In fact, notice is considered so critical to the patent system that the government itself undertakes the responsibility of providing notice to the public of the patent territory that it has granted and the person to whom that territory was granted. Loosely similar to the modern recording system for land, the federal government in the form of the PTO publicizes the full text of the patent itself, as well as any written history of negotiations between the patent holder and the government examiners—a history that may be relevant in identifying territory that the patent holder tried and failed to secure.

The terms "evolutionary ancestor" and "loosely similar" are used with great care in this Article to describe the relationship between patents and land. Although the patent system may indeed trace its lineage back to the system of real property, the modern patent system bears no more resemblance to land than modern humans resemble chimpanzees. They are simply different beasts.

The distinction can be understood in reductionist form as the following:[10] with land, society has some shared conception of what it is that one is trying to define, even if that conception is imperfect or incomplete at times. Patents, however, are granted on things that are new, and there are serious limitations in forming shared societal conceptions of things that are truly new. Worse yet, whatever language one chooses for the patent granted to the thing that is new, that language must be compared repeatedly to other products that did not exist when the patent was granted. Land does not suffer from this continual upheaval, and it is this perpetual unfolding of meaning that distinguishes the patent system sharply from systems related to land.

Nevertheless, the patent system is predicated on notice, and it applies a form of strict liability to those who would trespass. One who makes, uses, or sells a patented product, or a product embodying a patented process, is liable for patent infringement, regardless of whether the infringer independently invented it or had any direct knowledge of the patented invention. The patent system itself is intended to provide sufficient notice, a heavy responsibility given the potential consequences of violating someone's patent.[11]

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[10] For an extensive theoretical and descriptive discussion of why patents are not like real property, see FELDMAN, *supra* note 1, at 9–13, 211–12. The discussion of differences between patents and land is distinct from modern debates about whether the remedies in the patent system and whether these should follow so-called property rules or liability rules. *See, e.g.*, Andrew Beckerman-Rodau, *Patents are Property: A Fundamental but Important Concept*, 4 J. BUS. & TECH. L. 87 (2009) (a shift to liability remedies in lieu of property remedies for patent infringement is unjustified).

[11] Infringers may be liable for damages or an injunction. A spate of large patent infringement awards demonstrates the potential cost of infringement. Having one's product enjoined can be even costlier for a company.

One could argue that the communicative function evident in patent law extends only to information about the scope of the patent. From this perspective, the patent would simply be a warning to "stay away," and information on ownership would be irrelevant. This would, however, paint an odd economic picture in which a single inventor with a single patent moves forward in a solitary fashion to create a product requiring only that patent. The patent system is neither designed nor does it operate in this manner, and it would be economically irrational, if it did. Rather, trading and licensing historically has played an important role in the patent system, as patent holders seek out and find others who would commercialize their ideas in combination with the other rights necessary to create a viable product. Among other things, the patent system does not mandate vertical integration, a requirement that would be anathema to most modern economists. The following Parts examine the functioning of the modern patent system, exploring the ways in which ownership information contributes to the communicative and notice functions of the patent system.

III. PATENT OWNERSHIP & THE ROLE OF MARKET INFORMATION

Numerous commentators have written on the problem of notice failure within the patent system. For example, a 2013 governmental report, which cited scholars Bessen and Meurer, noted the following:

> In an optimal patent regime, patent property rights are clearly defined and easily determined so the world is on notice as to their existence, scope, and ownership. This "notice function" enables people to avoid infringement, negotiate permission to use others' IP, and maximize

> efficiency, such as by not keeping all inventions as trade secrets or doing R&D on inventions already claimed by someone else.[12]

The report then notes that the notice system has particularly broken down in the information technology sector, given that claims have "fuzzy boundaries" and it is economically infeasible or irrational for parties to search through existing patents to avoid infringement.[13]

Many scholars and commentators have described the vast and increasing number of active patents combined with the lack of predictability in judicial interpretation of patents.[14] To

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[12] BRIAN T. YEH, CONG. RESEARCH SERV., R42668, AN OVERVIEW OF THE "PATENT TROLLS" DEBATE 1 (2013).

[13] *See id*; *see also* FELDMAN, *supra* note 1, at 52–53; Jeanne C. Fromer, *Claiming Intellectual Property*, 76 U. CHI. L. REV. 719, 721 (2009); Michael Risch, *The Failure of Public Notice in Patent Prosecution*, 21 HARV. J.L. & TECH. 179 (2007).

[14] *See, e.g.*, Joseph Scott Miller, *Enhancing Patent Disclosure for Faithful Claim Construction*, 9 LEWIS & CLARK L. REV. 177, 177 (2005) (arguing that "[c]laim construction jurisprudence is in disarray" and noting that "the Federal Circuit reverses trial court claim construction decisions at a worryingly high rate"); Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 231 (2005) (documenting a "concern among the bench and bar that the Federal Circuit's de novo review of district court claim construction decisions and lack of guidance have caused considerable unpredictability"); *see also* Donald S. Chisum, *Reforming Patent Law Reform*, 4 J. MARSHALL REV. INTELL. PROP. L. 336, 340 (2005) (discussing claims that the Federal Circuit engages in "erratic and unpredictable decision-making"); Jeffrey A. Lefstin, *The Measure of the Doubt: Dissent, Indeterminacy, and Interpretation at the Federal Circuit*, 58 HASTINGS L.J. 1025, 1027, 1094 (2007) (arguing that despite the nearly seamless consensus of problems related to *de novo* review of patent claim construction, it is "the indeterminacy of patent law, rather than the application of patent law by the district courts or the Federal

put it simply, there are millions of patents outstanding, and it is difficult to know how any particular court will interpret each one. Considering that patents may have dozens of claims, and that a patent suit could rely on only one of the claims, the problem multiplies.

The difficulties may be more pronounced in some industries than in others, depending on the number of patents necessary to produce a typical product. Estimates suggest that 300,000 patents may be relevant to the average smartphone, far more than the number of patents relevant to a drug derived from a single chemical formula. Even for biopharmaceuticals, however, one must consider more than the patent on the single chemical formulation. Relevant patents could include those related to methods of manufacturing the drug in a form that is stable and can be mass produced, dosage forms, methods of treatment, screening methods used to identify the drug and its treatment methods, and other ancillary technologies.[15]

Scholarly works concerning notice failure in patents tend to focus on governmental actors and their role in ensuring that the scope of a patent can be properly identified. In particular, proposed doctrinal solutions have centered on Patent

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Circuit's review of the district courts," that "is responsible for the current circumstances of patent litigation"); John R. Thomas, *Claim Re-Construction: The Doctrine of Equivalents in the Post-Markman Era*, 87 J. PAT. & TRADEMARK OFF. SOC'Y 781, 792–93 (2005) (discussing unpredictable judicial claim construction in the Federal Circuit); R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1179 (2004) (concluding that whether the Federal Circuit is succeeding is an open question).

[15] *See* Robin Feldman & W. Nicholson Price, *Patent Trolling—Why Bio & Pharmaceuticals Are at Risk* (U.C. Hastings Research Paper No. 93, 2014), at 28–38, *available at* http://ssrn.com/abstract=2395987.

& Trademark Office regulations regarding how a patent must be drafted and what types of patents should be approved, as well as judicial doctrines and procedures to ensure more predictable interpretation at the Federal Circuit level and at the trial courts.[16] These are important considerations for enhancing the notice function of the patent system. One must also understand, however, the role that basic market information plays in ensuring a properly functioning patent system.[17]

As noted in the author's prior works, one tends to think of the moment of granting a patent as the moment in which a definitive definition is fixed.[18] From that perspective, a judge's role is to properly understand and interpret that definition. Meaning is contextual, however, and one cannot develop a complete understanding of the meaning of something without the full context of all those things that might or might not be included in the meaning. Whatever language one chose to describe the invention in a patent, that language must be compared to products and innovations that did not exist at the time of the patent grant. The inquiries the courts make will be guided by the serendipity of the products that emerge, with certain developments leading the courts to flesh out particular contours of the definition that would otherwise remain unexplored. This question and answer process ultimately results in a bounded set of rights, but one cannot know that bounded set of rights until the end of the twenty-year patent term, when all of the potential products have appeared and all

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[16] For an excellent description of the problems of lack of transparency in the modern patent system, including the problems that lack of market information can provide, see Proposed Changes to Require Identification of Attributable Owner, 79 Fed. Reg. 4105 (Jan. 24, 2014) [hereinafter Proposed Changes].

[17] *See* Risch, *supra* note 2.

[18] For an extensive exploration of the concepts touched upon in this paragraph, see FELDMAN, *supra* note 1, at 17–20.

of the questions that *will* be asked during that time *have* been asked. In other words, one cannot possibly know all of the contours of the definition of a patent, although certain doctrinal rules and structures will provide more efficiency in the development of that definition and in cabining the bargaining that occurs along the way.

In this context, the actions of market participants will be critical for all parties trying to understand how a particular patent and its definition may be unfolding in the marketplace. The static information of the patent itself will never be sufficient. This is not to suggest that market forces should have the power to determine the boundaries of a patent. The territory that a patent holder asserts, and the fact that others acquiesce to that assertion by taking licenses, may represent no more than the relative power of those who hold the patent. It may also reflect the odd economics of current patent litigation, in which a patent holder can impose large costs and risks on those who are currently making a product, without incurring much cost or risk itself.[19]

For example, a patent holder can file suit alleging infringement of a particular patent without specifying much more. This can impose a series of costs on the target company, which must try to analyze all of the claims in the patent, and all of its own products and activities, to look for any plausible reason for the allegation. Moreover, the cost to challenge a single patent in court can range from $600,000 to $6 million,

[19] For an excellent presentation of the economics of modern patent litigation, particularly as applied to patent monetization, see Colleen Chien, *Patent Assertion Entities* (2012), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2187314 (presentation to the DOJ/FTC Hearing on PAEs); *see also* Fiona M. Scott Morton & Carl Shapiro, *Strategic Patent Acquisitions*, SOC. SCI. RESEARCH NETWORK, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2288911.

with the amount increasing in cases of multiple patents or large portfolios. As a result, a patent holder can launch an attack on a target for a minimal expenditure, offering to settle below what it would cost the target to challenge the demand, or in some cases below what it would cost to fully analyze the demand. These economic realities may encourage target companies to settle, regardless of whether the patent is valid or validly asserted against them.

For example, one technology company described the process pointedly in an amicus brief to the Supreme Court on the issue of awarding fees.[20] The company noted that it has rarely lost a case brought by monetization entities, but that it has been forced to bear the legal costs:

> This reality is the lifeblood of the patent assertion industry. . . . Indeed, the opening line of many negotiations is some form of, "What we're asking for is less than it will cost you to litigate this case to judgment." It should come as no surprise, then, that despite its success in litigating the merits, for business purposes [our company] has agreed to a settlement in 51 of the 57 closed cases.[21]

In light of these patent litigation factors, the actions of market participants should not be relied upon to determine the proper boundaries of a patent. Nevertheless, such activity can provide important signaling information about how the market is unfolding and the territory claimed.

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[20] Brief for Apple Inc. as Amicus Curiae Supporting Neither Party, Highmark Inc. v. Allcare Health Management System, Inc., 572 U. S. ____ (2014) (No. 12-1163), *available at* http://www.americanbar.org/content/dam/aba/publications/supreme_court_preview/briefs-v3/12-1163-12-1184_np_amcu_apple.authcheckdam.pdf.
[21] *See id.*

A focus on market information is particularly important at this stage in the evolution of the patent system. Although the licensing and trading of patent rights unrelated to product development is not new,[22] the scope and scale of such modern activities are unusual. Large numbers of patents that would not have garnered a return in the past are being separated out from any underlying product and transferred in the form of commoditized, tradable rights.[23] New types of large and complex entities have appeared on the scene, including mass aggregators and various forms of patent clubs. In addition, as the market for patent monetization has accelerated, variations on the theme have emerged, including product companies who enter the monetization market by creating monetization subsidiaries, transferring assets to third parties, or joining various patent buying clubs.[24] Even universities have signaled their interest in entering the fray, with the Association of University Technology Managers announcing its intent to

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[22] *See* Naomi R. Lamoreaux, et al., *Patent Alchemy: The Market for Technology in US History,* 87 BUS. HIST. REV. 3, 21 (2013) (documenting attorneys who served as patent brokers in the nineteenth century); Gerard N. Magliocca, *Blackberries and Barnyards: Patent Trolls and the Perils of Innovation,* 82 NOTRE DAME L. REV. 1809, 1809 (2007) (quoting Sen. Isaac Christiancy, 8 Cong. Reg. 307 (1878) for a colorful description of patent sharks).

[23] For a detailed description of the emergence of the modern market for patent monetization and the forms of entities that have emerged, see Feldman, *Intellectual Property Wrongs*, *supra* note 7, at 264–68. *See also* Sara Jeruss, et al., *The America Invents Act 500: Effects of Patent Monetization Entities on U.S. Litigation,* 11 DUKE L. & TECH. J. 357 (2012); Tom Ewing & Robin Feldman, *The Giants Among Us,* 2012 STAN. TECH. L. REV. 1 (2012).

[24] For an in-depth analysis of different types of patent trolling entities, see Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls,* 113 COLUM. L. REV. 2117 (2012).

consider policies in support of transferring rights to monetization entities.[25]

As the market for patent monetization develops and expands, scholars and lawmakers must think of it in classic market terms. This includes, of course, ensuring the flow of information necessary to establish an efficiently functioning market. It is an ideal that remains far in the distance.

A. Notice Failure: A Lack of Market Information

As described above, in an optimal patent system, the world is on notice of the existence, scope and ownership of a patent. This information allows participants to avoid infringement, negotiate permission, and maximize innovation efficiency.[26] The modern patent system, however, bears little resemblance to this ideal, even with information as basic as patent ownership.

For example, although initial ownership must be noted for the PTO when one files a patent, transfers of ownership are not always recorded. For example, in prior work tracing the thousands of shell companies established by a large patent aggregator, this author and a co-author noted examples in which patent holders announced a sale to the aggregator but there was no change in ownership recorded at the PTO for many years.

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[25] *See* Paul Baskin, *Under Financial Pressure, Universities Give Patent Buyers a Closer Look*, CHRON. OF HIGHER EDUCATION (Oct. 25, 2013); *see also* Heidi Ledford, *Universities Struggle to Make Patents Pay,* NATURE (Sept. 24, 2013) (documenting examples of federally funded university patents that have been transferred to patent monetization entities).
[26] *See* sources cited *supra* note 12.

Even when formal ownership is properly recorded, such information represents the tip of the iceberg if one wants to understand who has the right to assert the patent—let alone how it has been asserted. Patent owners can transfer rights sufficient to assert a patent short of formally transferring ownership. For example, a university could grant an exclusive license to an entity. If worded properly, that license would give the entity not only the right to develop a product from the patent, but also the right to assert the patent against others. The exclusive license would not show up anywhere because licensing information is not recorded at the PTO, regardless of whether the license is exclusive or sufficient to allow assertion.

Ownership information can fall short in other ways as well. Suppose ownership is recorded at the PTO in the name of a parent company; the parent company has a number of subsidiaries, each of which holds a license to the patent. If a small business has paid for a license from the first subsidiary and is approached by the second subsidiary, it may be difficult for the small business to know that the subsidiaries are related; it may already hold a sufficient license.

Ownership information can be critical not just for licensing but also for challenging a patent. In this context, the complex structures of modern patent monetizers can be particularly difficult to penetrate. Consider the largest patent aggregator, Intellectual Ventures. With estimated holdings of 30,000–60,000 patents worldwide, Intellectual Ventures has the fifth-largest patent portfolio of any domestic U.S. company and the fifteenth largest of any company in the world.[27]

Working painstakingly from public sources, one can identify more than 1,200 subsidiaries associated with

[27] Ewing & Feldman, *supra* note 23, at 25–35.

Intellectual Ventures.[28] These subsidiaries exist in obscure networks with the "parent" company, following structures permitted by the corporate laws in many states. In prior work, this author has described the complex ownership structure of one of the subsidiaries, whose organization is typical of the structures of modern mass aggregators.[29]

The layers of shell companies can make it difficult for those who receive patent demands to challenge the validity of the underlying patents or the appropriateness of the demand against them. Consider the *Xilinx v. Invention Investment Fund I LP* case.[30] Xilinx filed a declaratory judgment action challenging some of the patents asserted against it.[31] The judge dismissed some of the parties that Xilinx named on the grounds that the patent owners were really seven other shell companies associated with the aggregator, rather than the ones Xilinx had named. In other words, Xilinx could not even tell who was asserting the patents against it so that it could sufficiently challenge those patents.

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[28] *See id.*
[29] "Searete LLC, a fairly well-known Intellectual Ventures shell company that exemplifies the complicated ownership and management structures employed by mass aggregators. Searete has the type of complex and carefully woven legal structure that would make a defense lawyer beam with joy. It is a Delaware limited liability company with a presence in Nevada. Searete's official manager in Nevada is 'Nevada Licensing Manager, LLC,' which is a Nevada corporation. Nevada Licensing Manager's own manager is 'Nevada Assets, LLC,' which is a Delaware company. At some point, Nevada Assets, LLC presumably connects with Intellectual Ventures, LLC or one of Intellectual Ventures' many investment funds. However, the connection might be little more than the ownership of shares, effectively rendering almost no one responsible for its actions." *See id.* at 38 (footnotes omitted).
[30] *Id.* at 39–40 (citing No. 11-CV-0671 (N.D. Cal. filed Feb. 14, 2011)).
[31] *Id.*

Although Intellectual Ventures is a mass aggregator with tens of thousands of patents, one can see similar structuring strategies at work with an example of a small player, MPHJ Technology Investments, LLC. Working with just five patents, the company created more than 100 subsidiaries to assert those patents, sending thousands of letters to small businesses. Some of the small businesses received letters from more than one subsidiary across time. When the target is a small player with little knowledge of the patent system and patent licensing, this type of approach can result in multiple payments to what is essentially the same entity.

To the extent it is difficult for a party accused of infringement to find information, the difficulty for those trying to understand if they might need to enter into a licensing arrangement and for whom to approach is even greater. As described above, one cannot rely on publicly recorded information at the PTO, in the way that one can rely on recorded land ownership. Market information is limited as well. Licenses and settlements by patent assertion entities are typically shrouded in strict nondisclosure agreements, which prevent the parties from revealing anything about the interaction. This secrecy blocks information from filtering into the market that would allow others to understand who is asserting the patent and what territory is being claimed.

One might think that information would improve once a lawsuit is filed, given that lawsuits are a matter of public record. Although some information becomes available, the information is limited and not easily accessible. As a starting point, many monetization entities are organized as limited liability companies, with the result that information on related entities may be limited. Moreover, judges are frequently willing to seal documents, an action that has the effect of limiting the information that does arise. In fact, much of the information that is now available from the Xilinx case

mentioned above was originally sealed by a judge, who later chose to recuse herself from the case.[32] The information was only released when a subsequent judge chose to grant the motion to make the information public.

Information that does appear in litigation may be difficult for the public to access—even basic information such as whether a patent has been asserted in a lawsuit. In theory, the PTO's public database includes information on whether a particular patent has been asserted in any lawsuits. That information, however, is questionable. A recent empirical study of all 15,000 patent lawsuits filed over four recent years, along with the 30,000 patents asserted in those lawsuits, determined that in two-thirds of the cases, the main PTO database failed to show the lawsuit. A less well-known PTO database related to freedom of information provides better coverage but still misses almost one-third of the instances in which lawsuits were filed.[33] Most importantly, studies suggest that the vast majority of patent demands—perhaps more than 90 percent—never result in the filing of a lawsuit.[34] Thus, the vast majority of information that might be available to the market remains hidden away.

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[32] *Id.*

[33] Robin Feldman et al., *The AIA 500 Expanded: Effects of Patent Monetization Entities,* UCLA J.L. & TECH. (forthcoming 2014).

[34] EXECUTIVE OFFICE OF THE PRESIDENT, PATENT ASSERTION AND U.S. INNOVATION (2013), *available at* http://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf; WHITE HOUSE OFFICE OF PRESS SECRETARY, FACT SHEET: WHITE HOUSE TASK FORCE ON HIGH-TECH PATENT ISSUES (2013), *available at* http://www.whitehouse.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues.

B. Why Does Market Information on Patent Ownership Matter?

In the context of modern monetization, market information on patent ownership can make an important contribution to an efficiently functioning patent system. One can begin with the basic notion that markets function better when players in the market can identify each other. The ability to know who hold an asset and how to reach that party is an essential starting point for any market. This type of information can avoid the confusion and misinformation that can result in wasteful transaction costs. To put it simply, shell games and hide-and-seek rarely make for an efficiently functioning market.

With patents, moreover, the rights are not one-dimensional. Given the potential to separate and distribute patent rights in various configurations, identifying who is the "owner" of the right is only the beginning. Depending on the rights structure established for a particular patent, key questions could involve who has the right to assert the patent and who has control to varying extents of assertion of the patent. In light of the convoluted structures involved, understanding the money flow also can be an essential part of understanding who is in control.

Identifying the parties can also provide information about the territory claimed. The ability to see who controls a patent and how that patent is being asserted can give notice to the public of what the patent holders believes is the appropriate footprint of the patent. That footprint may emerge not simply in one assertion but through the full body of assertions. In particular, a patent in one field that is being asserted in another field puts other players on notice, allowing them to plan and bargain appropriately.

Market information also can be helpful in addressing the bargaining asymmetries reflected in the economics of modern patent assertion. Although it is certainly not a panacea, accused infringers may benefit from being able to understand clearly all of the parties who are involved in the patent, see others who have been targeted, and see the results of different assertions that the patent holder (and its entities) have made.

Information on the various parties who have interests in the patent has efficiency implications for the judicial system as well. Properly identifying those with relevant interests can avoid duplicative filings and enhance the potential for an efficient settlement process. In this context, the court may benefit from being able to identify all of the relevant parties. This, of course, would only be useful if the court is able to bring those parties into the proceedings when appropriate; an issue that implicates judicial joinder rules. Nevertheless, the question of whether and when it is appropriate to join must begin with information on who is in the universe of potential interests. Such information provides the framework if courts or regulators wish to hold those with pecuniary interests responsible for damages that may have been imposed in the pursuit of their financial interests.

One could argue that the process of eliciting information on the universe of potential parties will have judicial efficiency costs. Parties will have to spend time filing the information with the court, and disputes about the adequacy of information provided will, inevitably, arise. There are always costs associated with providing information to the market, however. The key is finding an appropriate mechanism to minimize those costs while providing the information necessary for efficient transactions and settlement. In addition, such costs are likely to pale in comparison to the current inefficiencies of the patent litigation system. Shadow boxing is rarely an efficient judicial sport.

Finally, market information on the identity of those who hold interests in patents and the territory they are claiming with those patents is important from a societal perspective. With the emergence of the modern market for patent monetization, it will be essential to develop the type of oversight that can identify inappropriate behavior when it occurs and cabin that behavior, as well as identifying patterns that are likely to lead to market inefficiencies.

Allowing vast networks of hidden behavior has the happy coincidence of preventing regulatory actors from observing problematic behavior. From a societal perspective, the result is less than optimal. Regulatory actors, such as public and private antitrust actors, as well as securities regulators where appropriate, must be able to connect the dots that would reveal a troubling picture.

Such regulatory transparency is particularly important for patents. Patents are government grants, which are granted for specific constitutional and legislative goals. When an active and complex trading market develops for those grants, it is essential for society to have the ability to determine whether that market is functioning appropriately and whether it serves the goals of the system.

C. Following an Established Path

Business environments thrive on stability, and uncertainty can create friction in the market. Any transition toward transparency has the potential to create uncertainty for patent holders, as well as all players in the market. Thus, an optimal approach to transparency would benefit from an established set of legal doctrines that create analogies for the information regime required, as well as an active track record of success.

This article suggests that Section 16 of the Securities Laws provides an excellent framework for the transparency of beneficial ownership that would so greatly advance the interests of the patent system. The following section describes Section 16 and its applicability as a model for the patent system.

IV. SECTION 16 AS A MODEL FOR A PATENT DISCLOSURE

¶ 1 As the legal system works toward a more powerful and effective disclosure framework for patent litigation, an especially fertile source of inspiration can be found in the area of securities law. A particularly promising starting point is Section 16 of the Securities Exchange Act of 1934 ("the Securities Act" or "the Act"), which mandates various financial disclosures by company insiders as part of the Act's safeguards against insider trading.[35] As mandated by the disclosure provision contained in Section 16(a), all company directors, officers, and beneficial owners of more than 10 percent of their company's registered equity securities are required to file detailed reports about their equity holdings in the company.[36] The narrow goal of Section 16 is to deter short selling and profiteering in violation of fiduciary duty. More broadly, the transparency it mandates is intended to discourage improper behavior by making all relevant transactions public.

¶ 2 Patent litigation could greatly benefit from the transparency provided by such disclosures, discouraging improper behavior by forcing parties to operate in the open.[37]

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[35] 17 C.F.R. § 240.16a-2 (2014).
[36] *Id.*
[37] *See* Ewing & Feldman, *supra* note 23, at 37–38.

A disclosure requirement based on Section 16 could make it much easier for defendants to identify the parent entities that are actually in control of the litigation filed against them, opening up new avenues for recourse and potentially discouraging questionable activity altogether. This Section will examine Section 16 as a model for disclosure reform, first by providing an overview of the law's history, then by following up with a substantive analysis of relevant portions of the law, and finally by making recommendations tailored to patent law's needs.

A. Background on Section 16: Legislative History and Rationale

Though securities regulation and patent law might seem like strange bedfellows, they are actually quite similar at a conceptual level.[38] Prohibitions against insider trading and patent infringement each aim to protect "the economic incentive to produce socially valuable information."[39] Just as innovators would lack the incentive to produce new products without patent protection, investors would not invest in a particular activity if "the profit from [that] activity is likely to be diverted" by insider trading.[40]

An examination of the events that led to Section 16's passage and its legislative history paints a picture of a controversial solution to an equally controversial problem,

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[38] Michael Risch has even suggested that patent portfolios, such as those held by patent aggregators, could be treated as securities under interpretations of current securities law. *See* Risch, *supra* note 2.
[39] Stephen M. Bainbridge, *Insider Trading*, 3 ENCYCLOPEDIA OF LAW & ECON. 772, 792 (2000).
[40] United States v. Chestman, 947 F.2d 551, 577 (2d Cir. 1991) (Winter, J., dissenting).

resulting in a law that has been revisited and revised several times since its original passage. Patent law can learn much from that experience, stepping into the shoes of what is now a robust, and well-accepted, framework.

The events that led to the passage of Section 16 and the Securities Exchange Act of 1934 were the culmination of more than two decades' worth of growing discontent over the impact of economic policies in the United States.[41] In particular, the Panic of 1907 was a devastating banking crisis, triggered in large part when a handful of recklessly speculative business magnates tried and failed to corner the market on United Copper Company stock.[42] Following that crisis, many Progressives became wary of the manner in which prominent financiers like J.P. Morgan consolidated their wealth and influence at the expense of competition.[43] In this climate of suspicion towards the increasing consolidation in the financial sector, Democratic Congressman Arsene Pujo convened a series of hearings to determine the extent of the anticompetitive practices that had taken root.[44] The hearings uncovered the

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[41] *See* JOEL SELIGMAN, THE TRANSFORMATION OF WALL STREET 7, 76 (2003).
[42] ROBERT F. BRUNER & SEAN D. CARR, THE PANIC OF 1907: LESSONS LEARNED FROM THE MARKET'S PERFECT STORM 38 (2007).
[43] *Id.* at 182. The nature of the current market for monetization, with its opportunities for conflicts of interest and hidden trading, suggests the potential for some of the same issues that concerned legislators from this era. The parties themselves have difficulty keeping track of the web of relationships. For example, press articles have chronicled one patent auction in which the Chairman of one entity bidding on the patents was also an officer of another entity bidding on the same patents. *See* Roger Parloff, *Taking on the Trolls*, FORTUNE (Mar. 17, 2014, 11:54 AM), http://fortune.com/2014/02/27/rpx-taking-on-the-patent-trolls. Although both entities were private, the episode demonstrates the Wild West nature of this emerging and largely unregulated market.
[44] BRUNER & CARR, *supra* note 42, at 148.

existence of massive joint accounts known as "pools," in which prominent investors working with a broker coordinated the purchase and sale of large amounts of a particular security in order to manipulate its price.[45]

As history would show, these pools contributed to the 1929 stock market crash, which in turn led to the Great Depression. Section 16 grew from the reform efforts that targeted these pools during the push for reform after the crash.[46] Although the Pujo Committee shined a spotlight on the existence of the pools in 1929, it was not until a series of Senate Banking Committee hearings in 1932 that Congress uncovered just how great the level of market manipulation had been in the course of the pools' operation.[47] In what became known as the Pecora Commission hearings, the Banking Committee found that the pools had actively manipulated the public by creating the false impression of demand for particular securities—even paying financial writers to write favorable articles about the securities to inflate prices.[48] Once pool members had sufficiently drawn in enough of the public to drive the price of the security to sky-high levels, members would unload their shares.[49] Revelations of other distasteful financial practices came to light during the hearings as well, but the extent of the evidence gathered made it clear that pool

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[45] Report of the Committee Appointed Pursuant to House Resolutions 429 and 504 to Investigate the Concentration of Control of Money and Credit, H.R. REP. NO. 62-1593, at 46 (1913).
[46] PETER J. ROMEO & ALAN L. DYE, SECTION 16 TREATISE AND REPORTING GUIDE 18 (2d ed. 2004).
[47] *Id.* at 17.
[48] *Stock Exchange Practices: Hearings Before the S. Comm. on Banking and Currency*, 72d and 73d Congs. 445–55 (1932–1934) [hereinafter *Stock Exchange Practices*].
[49] *Id*.

operations were at the "heart of the problem[s]" that had led to the Crash.[50]

Following the Pecora Commission hearings, House and Senate members introduced the bills that would eventually become the Securities Exchange Act of 1934, including language that would become Section 16.[51] Early on, the Section 16 disclosure requirements were hailed by the section's proponents in Congress as one of the bills' critical components. The requirement aimed to use transparency to ensure that company insiders would not act against the interests of other shareholders. By forcing insiders to publicize certain aspects of their financial dealings public, the sections strived to ensure that public scrutiny would force insiders to adhere to their fiduciary duties.[52] Indeed, some observers viewed the disclosures as sufficient to curb insider trading on their own.[53]

However, once legislators expanded the scope to include large shareholders, the disclosure requirements became the target of harsh criticism from the financial community. Subjecting directors and officers to the disclosure requirements was not initially controversial, particularly given the charged climate following the Pecora hearings.[54] In fact, the record shows that members of Congress considered such a requirement in line with directors' and officers' common law duty of fiduciary loyalty and fair dealing as owed to their

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[50] ROMEO & DYE, *supra* note 46, at 18.
[51] *Id.* at 23.
[52] 2 FEDERAL SECURITIES EXCHANGE ACT OF 1934, §8.01 (A.A. Sommer, Jr., ed., 2013).
[53] ROMEO & DYE, *supra* note 46, at 24 (citing *Stock Exchange Practices*, *supra* note 48 (statement of Alfred L. Bemheim, Director of the Securities Markets Survey of the Twentieth Century Fund, Inc.)).
[54] *Id.* at 26.

shareholders.[55] Section 16 went beyond the traditional view, however, by applying disclosure requirements to large shareholders, who unlike officers and directors had not historically been regarded as having any common law moral or legal duty to other shareholders of the company.[56]

Proponents of the provision reconciled the more expansive approach by arguing that "large shareholders [are] the equivalent of common law fiduciaries," given that they are often in just as much of a position to "influence or control" a company's board of directors as the actual directors themselves.[57] Indeed, in some of the worst cases of insider misconduct uncovered by the Pecora Commission, financiers often fell into both categories, exercising control both through official title and through equity ownership. Perhaps the most notorious was Albert H. Wiggin, Chairman of the Board of Chase National Bank, whose blatant profiteering through insider information was so notorious that Section 16 was commonly called the "anti-Wiggin" provision.[58]

Another point of contention over shareholder disclosures was the percentage of ownership required before a person would be subject to Section 16. Advocates for the provision initially argued that the threshold should be 5 percent, while those in opposition—chief among them the financiers who would be subject to the requirement—argued that it should be as high as 20.[59] Although the House and Senate versions of the bill initially specified 5 percent, the

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[55] *See* 78 CONG. REC. 8036–37 (May 3, 1934).
[56] ROMEO & DYE, *supra* note 46, at 26.
[57] *Id.* at 27.
[58] SELIGMAN, *supra* note 41, at 87.
[59] ROMEO & DYE, *supra* note 46, at 27 (citing Stock Exchange Practices: Hearings Before the Senate Comm. on Banking and Currency, 72d and 73d Congs. 7741–43 (1932–1934)).

Senate version was amended to 10 percent.[60] The Conference Committee adopted the Senate version, and Section 16 as it stands today contains a disclosure threshold of 10 percent.[61]

B. SEC Rulemaking & The Modern Section 16(a) Disclosure Requirement

Much has changed in the eight decades since passage of the 1934 Securities Act. In particular, SEC rulemaking has clarified the requirements of the Act and the definition of those included under Section 16's disclosure obligations. Understanding the modern application of Section 16 is critical for properly adapting those rules to the patent context.

The key disclosure requirements in Section 16(a) are set forth in the first paragraph of Rule 16a-2, which specifies the categories of people who will be considered "insiders" subject to Section 16:

> Any person who is the beneficial owner, directly or indirectly, of more than ten percent of any class of equity securities ("ten percent beneficial owner") registered pursuant to section 12 of the Act, any director or officer of the issuer of such securities, and any person specified in section 30(h) of the Investment Company Act of 1940, including any person specified in § 240.16a-8, shall be subject to the provisions of section 16 of the Act.[62]

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[60] *Id.*
[61] *Id.*
[62] 17 C.F.R. § 240.16a-2 (2014).

Essentially, Rule 16a-2 specifies that directors, officers, and beneficial owners of more than 10 percent of equity securities in the company must make financial disclosures.[63] Although the meaning of "director" has not been the subject of much controversy, the definition of "officer" as originally passed was widely seen as overly broad, while "beneficial owner" was not defined at all.[64]

To remedy the uncertainty that had developed surrounding these terms, the SEC in 1991 passed an overhaul of the Section 16 regulations.[65] In a shift that is particularly relevant for our purposes, the 1991 changes altered the definitions in a manner that, taken as a whole, creates a wider variety of ways in which a person or entity can be shown to have control over a corporation.

1. The Section 16 Beneficial Ownership Requirement

The 1991 overhaul created a formal definition for the category of "beneficial owner." This category, nevertheless, continues to have the greatest complexity in practice in part, because the term "beneficial ownership" has two different meanings, depending on the stage of analysis. The first definition of "beneficial ownership" applies at a threshold stage in which insider status is determined using a narrower definition found under Section 13(d). At this threshold stage, a beneficial owner is defined as a person who owns 10 percent or more of the company's securities, "directly or indirectly,

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[63] *Id*.
[64] ROMEO & DYE, *supra* note 46, at 58.
[65] OWNERSHIP REPORTS AND TRADING BY OFFICERS, DIRECTORS AND PRINCIPAL SECURITY HOLDERS, EXCHANGE ACT RELEASE NO. 34-28869, 48 SEC DOCKET 234 (1991) [hereinafter 1991 SECTION 16 OVERHAUL].

through any contract, arrangement, understanding, relationship," and who has voting or investment power over those securities.[66]

In keeping with Congress' intent to apply Section 16 only to those shareholders who can influence or control a company, the SEC also exempts from the category of "beneficial ownership" certain people and institutions who own equity for reasons not related to control or influence.[67] These include brokers, banks, insurance companies, and mutual funds, among others.[68]

Beneficial ownership can arise under Section 13(d) in an anticipatory manner. A person is a beneficial owner of shares not yet acquired if he or she has the right to acquire them within sixty days.[69] In addition, when two or more people "agree to act together for the purpose of acquiring, holding, voting or disposing of equity securities of an issuer," the group they form is collectively considered a beneficial owner.[70] Given that it may be difficult to recognize the creation of a Section 13(d) group "at the time of the group's formation," and that a group's existence, as far as statutory requirements are

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[66] 17 C.F.R. § 240.13d-3. According to the 1991 SEC release outlining the Commission's Section 16 overhaul, the rationale behind the use of the Section 13(d) definition was to effect Congress' intent to apply Section 16 to those that can influence or control a company through their equity ownership. *See* 1991 SECTION 16 OVERHAUL, *supra* note 65, at 236. Given that Section 13(d), like Section 16, was also intended to cover circumstances in which a party could potentially gain control over a company through accumulation of equity, the Commission reasoned it was appropriate to reference the 13(d) definition. ROMEO & DYE, *supra* note 46, at 108.
[67] 17 C.F.R. § 240.16a-1(a)(1).
[68] *Id*.
[69] *Id.* § 240.13d-3(d)(1)(i).
[70] *Id.* § 240.13d-5(b)(1).

concerned, may be understood after the fact, beneficial ownership by a group provides perhaps one of the most common ways to incur liability under Section 16.[71]

One should note that corporations, partnerships, LLCs, and other entities also can be beneficial owners under Section 16.[72] When a corporate subsidiary is deemed a beneficial owner of certain securities, each upper-level subsidiary in the corporate hierarchy is also deemed a beneficial owner, given that each has the ability to take control of subsidiaries "below it in the chain."[73]

The determination of beneficial ownership, however, is less cut-and-dried in the case of independently-operated business units. In 1998, the SEC published an interpretive position stating that under certain circumstances, shares owned by independently-operated business units do not have to be attributed to the parent company for the purpose of determining beneficial ownership. Relevant factors include whether or not the business units are truly independent of the parent company.[74]

Given the extent to which patent aggregators utilize corporate structures that obfuscate both the chain of command and the extent to which their subsidiaries operate independently, one might be concerned that if Section 16 rules were adopted in the patent context, aggregators might develop structures designed to avoid parent reporting responsibilities. The SEC's Section 16 analysis, however, adopts from Rule

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[71] ROMEO & DYE, *supra* note 46, at 88.
[72] *Id.* at 122.
[73] *Id.* at 122–23.
[74] AMENDMENTS TO BENEFICIAL OWNERSHIP REPORTING REQUIREMENTS § II.F.5, EXCHANGE ACT RELEASE NO. 34-39538, SEC. & EXCH. COMM'N (1998).

13d-3(b) a comprehensive provision preventing such evasive behavior. The regulation holds that if a party is found to have created any sort of arrangement designed to avoid beneficial ownership, the party will be found to have beneficial ownership nevertheless:

> Any person who, directly or indirectly, creates or uses a trust, proxy, power of attorney, pooling arrangement or any other contract, arrangement, or device with the purpose of effect of divesting such person of beneficial ownership of a security or preventing the vesting of such beneficial ownership as part of a plan or scheme to evade the reporting requirements of section 13(d) or (g) of the Act shall be deemed for purposes of such sections to be the beneficial owner of such security.[75]

2. Section 16 and the Notion of "Pecuniary Interest"

As described above, the term "beneficial ownership" has two different meanings, depending on the stage of analysis, with the narrower definition applying at a threshold stage. The second definition of "beneficial ownership" turns on the concept of "pecuniary interest," and this is what governs the actual disclosures that must be made under Section 16(a). Specifically, a person or company must disclose any securities owned for which the person or company is a "beneficial owner," defined in Rule 16a-1(a)(2) as "any person who,

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[75] 17 C.F.R. § 240.13d-3(b); *see also* CSX Corp. v. Children's Inv. Fund Mgmt. (UK) LLP, 562 F. Supp. 2d 511 (S.D.N.Y. 2008), *aff'd*, 292 F. App'x 133 (2d Cir. 2008), *aff'd in part*, *vacated in part*, *remanded*, 654 F.3d 276 (2d Cir. 2011) (applying the provision).

directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares direct or indirect pecuniary interest in the equity securities."[76] The rule defines a pecuniary interest generally as the "opportunity, directly or indirectly, to profit or share in any profit derived from a transaction in the subject securities."[77] The regulations contain a "safe harbor" exemption that protects ordinary shareholders who lack investment or voting control over their securities from being found to have a pecuniary interest.[78]

While the rules do not further elaborate on the notion of a "direct pecuniary interest," they do go into more detail regarding the "indirect pecuniary interest" standard, which was added as part of the SEC's 1991 clarifying rules and serves to significantly broaden the range of disclosures required under Section 16.[79] Under the indirect pecuniary interest standard, an insider would have to file a disclosure if that person has a right to payment "based on" the profits from another person's securities transaction, even if that person has no right to the actual profits.[80]

The rules further specify six situations in which an "indirect pecuniary interest" exists "in any class of equity securities." These include shares held by members of a person's immediate family that live in the same household; a general partner's interest in the shares held by the partnership; performance-related fees collected by fiduciaries such as brokers, banks, and insurance companies; separable dividend

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[76] 17 C.F.R. § 240.16a-1(a)(2).
[77] *Id.* § 240.16a-1(a)(2)(i).
[78] *Id.* § 240.16a-1(a)(2)(iii).
[79] STANTON P. EIGENBRODT, A PRACTICAL GUIDE TO SECTION 16: REPORTING AND COMPLIANCE 2-12 (2003).
[80] *Id.* at 2-13.

rights; certain trust interests; and the right to acquire shares through a derivative security.[81]

The rules specify, however, that the list of arrangements is not exclusive.[82] The existence of a pecuniary interest can be a fact-specific inquiry, and some courts have exercised significant interpretive discretion in inferring the existence of a pecuniary interest.[83]

C. Lessons from Section 16

The statutory requirements for beneficial ownership and pecuniary interests, combined with SEC guidance and judicial interpretation of these concepts, reflect the wisdom gained from years of avoidance techniques. The long and detailed history surrounding Section 16's disclosure requirements provide ample interpretive context regarding how such requirements operate when challenged by market actors who may prefer to avoid disclosure. The experience gained through such a rich legacy would be invaluable when crafting corporate disclosure requirements in another context.

The notion of stemming avoidance techniques is particularly important in the context of modern patent monetization. Patent assertion entities have proven as creative as the inventors whose patents they purchase—at least from the

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[81] 17 C.F.R. § 240.16a-1(a)(2)(ii).
[82] *Id.*
[83] *See* Strauss *ex rel*. Servico, Inc. v. American Holdings, 902 F. Supp. 475, 481 (S.D.N.Y. 1995) (noting that "[w]hile the Court recognizes that the failure to come within a 'safe harbor' does not ipso facto mean that a defendant is lost at sea, the policies of Section 16 warrant the conclusion that the complaint sufficiently alleges facts from which an inference of pecuniary interest in Amhold's trades might be drawn with respect to Koether").

standpoint of legal structuring. As the PTO observed, some use complicated corporate structures and licenses to hide their identities from the public.[84] Regulatory frameworks that do not anticipate such creativity are likely to be ineffective. Worse yet, failure to anticipate such legal creativity could have the unintended effect of worsening anticompetitive behavior in the field of patent monetization. Large, sophisticated players may be able to restructure their portfolios while the new legislation or regulation conveniently eliminates their smaller, less sophisticated competition. Such consolidation within any market would be undesirable, particularly if the government is an unwitting participant in the process.

D. Adapting Section 16 for a New Patent Litigation Disclosure Framework

The securities regulation framework could be adapted comfortably to the patent law context in the following manner. Section 16's touchstone is equity securities, with the disclosure requirements attaching in relation to ownership or interests in those securities. Applying these concepts to the patent market, the similar touchstone would be the patent itself, with the disclosure requirements attaching in relation to ownership, control, or interests in the patent.

Monetizers organized as limited liability companies may be tempted to object that the application of doctrines related to public companies should not be imported to apply to them. After all, they are not publicly traded entities but remain private companies or partnerships. The public interest, however, attaches not to the status of their organization but to the status of the asset they have the potential to trade. That asset is imbued with public interest by virtue of the fact that it

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[84] Proposed Changes, *supra* note 15, at 4109.

is a government grant, bestowed only for purposes enshrined in the Constitution itself. As with the trading of public securities, the trading of an asset imbued with the public interest must be sufficiently regulated to ensure proper functioning of that trading market.

With securities law as a reference, any transparency requirements for patents should include two key concepts. The first concept concerns the potential to benefit from assertion of the patent asset; the second concerns structures designed to evade the regulatory definitions established.

First, to properly capture the range of ways in which a party might benefit from assertion of a patent, one would need a broad definition—and one that is tailored specifically to the modern patent monetization market. As described above, of course, assertion of the patent refers not only to filing a lawsuit but also to making patent demands outside of litigation. Thus, the category of those who would benefit from assertion of a patent includes not just those who would receive the proceeds from a lawsuit settlement, but also those who would receive proceeds from the patent outside of a lawsuit.

On a basic level, one would ideally want to know where the money is flowing. This would include securities law concepts such as "beneficial ownership" and "pecuniary interest," including notions related to the "opportunity, directly or indirectly, to profit or share in any profit derived from a transaction . . . ."[85] On another level, one would want to know about voting and investment power. Securities law concepts also may be helpful here as in identifying those who have

[85] 17 C.F.R. § 240.16a-1(a)(2)(i).

voting or investment control over any entity with the ability to assert the patent.[86]

On a more subtle level, regulators in particular would want to be able to identify less formal group behavior. For example, suppose a group of companies forms a limited liability company and hires a management company to exploit a particular patent. One could imagine a large company providing funding or other support to the patent holding entity, not to receive any compensation from assertion of the patent but in order to destabilize a competitor. Moreover, other support could come in the form of offering database resources to analyze the patent or identify potential targets, marshaling legal resources, or other actions.

It is possible that certain securities law concepts might cover aspects of this issue. Arguably, the notion of profiting indirectly, which is contained in the language of "opportunity, directly or indirectly, to profit or share in any profit derived from a transaction" could cover that circumstance.[87] Similarly, the securities law concept of beneficial ownership contains a concept of group action, noting specifically that when two or more people "agree to act together for the purpose of acquiring, holding, voting or disposing of equity securities of an issuer," the group they form is collectively considered a beneficial owner.[88] Nevertheless, given the history of avoidance structures in patent monetization, any legislative or regulatory

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[86] *Id.* § 240.13d-3(a), (d)(1)(i) (specifying that a person is a beneficial owner either if he or she has voting or investment control over shares already owned, or if a person is a beneficial owner of shares not yet acquired if he or she has the right to acquire them within sixty days).
[87] *Id.* § 240.16a-1(a)(2)(i).
[88] *Id.* § 240.13d-5(b)(1).

regime would benefit from defining the meaning of the term explicitly and expansively, as well as offering examples.

The potential for avoidance leads to the second concept that would be essential for any patent transparency regime. The disclosure language must encompass, and indeed anticipate, attempts to develop structures that will slide between the examples and definitional language provided. One would want to adopt a regime loosely analogous to the step transaction doctrine in tax law, in which regulators collapse the steps of a transaction when it is structured for avoidance.[89] Once again, the securities law language includes within the definition of beneficial owner those who directly or indirectly create devices to evade reporting requirements.[90]

Finally, securities law contains an exemption from reporting requirements for certain categories of people and institutions, such as brokers, banks, insurance companies, and mutual funds. These are exempted on the grounds that they own equity for reasons not related to control or influence.[91] Given the structure of certain aggregators and the temptations for avoidance, one would want to draft any such exemption with extreme care. For example, some patent aggregators are

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[89] *See* Feldman, *Intellectual Property Wrongs*, *supra* note 7, at 310 (suggesting analogies to the step transaction doctrine as part of a proposal for a judicial doctrine of inappropriate use of intellectual property).

[90] 17 C.F.R. § 240.13d-3(b) (specifying that "[a]ny person who, directly or indirectly, creates or uses a trust, proxy, power of attorney, pooling arrangement or any other contract, arrangement, or device with the purpose or effect of divesting such person of beneficial ownership of a security or preventing the vesting of such beneficial ownership as part of a plan or scheme to evade the reporting requirements of section 13(d) or (g) of the Act shall be deemed for purposes of such sections to be the beneficial owner of such security").

[91] *Id.* § 240.16a-1(a)(1).

organized as investment funds, and one would not want to allow the definition of mutual fund to expand to exempt these entities from transparency requirements.

Timing of the disclosure obligation will be important both for market players and for patent holders themselves. Too frequent disclosure over-burdens the patent holder while infrequent disclosure leaves market players in the dark and allows game-playing. As described below in Section E, the PTO has, at times, proposed disclosure requirements in conjunction with maintenance fees and post-grant proceedings. Section E will discuss why such timing is insufficient for adequate disclosure.

An effective transparency regime could require disclosure at several points in the life of a patent. These could include critical moments—such as the patent application, the patent grant, transfer of ownership, maintenance fees, lawsuits, and post-grant review, in addition to update requirements on an annual or sufficiently frequents basis. For those who are concerned that individual patent owners will be hurt by their inability to follow transparency requirements, the system could provide mitigation opportunities for small players, for example, allowing small players to cure a defect upon request. When small players trade with large players, however, obligations on the large players would prevent the creation of loopholes that sophisticated players could exploit. No disclosure system could eliminate all opportunities for strategic behavior, but a well-crafted regime that relies on the history of corporate securities disclosure could provide for a more efficient and smoothly functioning patent market.

E. Comparative Proposals

As concerns have mounted over the lack of information about patent ownership and control, members of Congress and

the PTO have floated various proposals.[92] Any transparency would be an improvement over the status quo, and even a small amount of sunshine would be a welcome relief. Thus, even the narrowest of proposals has merit, although some approaches have greater potential for bringing forth significant information. Nevertheless, these proposals would not necessarily result in a level of transparency commensurate with the full information necessary for rational patent behavior and an optimally functioning market.

Looking first at the PTO proposals, in 2012, the PTO published proposed requirements for recordation of "real-party-in-interest information" when a patent is pending and during the patent term.[93] In addition to the benefits of more effective market clearing, the PTO notice cited the importance of aiding the agency in its operations by ensuring that any proceedings are authorized by the prior owner and ensuring that the PTO's own officials would know when to recuse themselves. Other

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[92] As of publication of this article, the PTO's Deputy Director has indicated that the Office is not planning to act on those proposals, deferring instead to Congress to address the issue. *See* Ryan Davis, *USPTO Backs Away from Patent Transparency Rules,* LAW360 (Oct. 27, 2014, 4:48 PM), http://www.law360.com/articles/590197/uspto-backs-away-from-patent-transparency-rules (speech by USPTO Deputy Director Michelle Lee). For an interesting discussion of potential statutory authority for the Patent & Trademark Office to promulgate transparency requirements, and limits on that authority absent congressional action, see Dennis Crouch, *Whither the USPTOs Authority to Require Ownership Recordation,* PATENTLY-O (Feb. 10, 2014), http://patentlyo.com/patent/2014/02/authority-ownership-recordation.html.

[93] Notice of Roundtable on Proposed Requirements for Recordation of Real-Party-in-Interest Information Throughout Application Pendency and Patent Term, 77 Fed. Reg. 70,385 [hereinafter USPTO Proposed Rules] (proposed Nov. 26, 2012) (to be codified at 37 C.F.R. pt. 3).

concerns included resolving prior art issues and properly initiating third-party proceedings.[94]

The PTO proposed two alternative definitions of real-party-in-interest, both of which were offered for public commentary. The first definition was "necessary and sufficient to bring a legal infringement action." The second definition was "the ultimate parent entity," which was further defined as "an entity which is not controlled by any other entity."

Both definitions for real-party-in-interest reference legal doctrines that would be far too narrow to ensure transparency. The first concept, as well as the actual term "real-party-in-interest" itself, references the disclosure required in some jurisdictions that would allow judges to decide whether they must recuse themselves from a case.[95] Such conflicts of interest typically arise if the judge has an investment in a company with a direct interest in the proceeding.[96] It is this requirement that eventually revealed the names of those who had invested in certain funds organized by the mass aggregator, Intellectual Ventures in the Xilinx case.

The real-party-in-interest concept, however, applies in drastically limited circumstances. For example, although real-party-in-interest may reveal investors, those who invest in a fund may not be the same as those who control the decision making for the entity running the fund or related entities. Nor does real-party-in-interest information communicate the relationships among various shell companies and entities,

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[94] *See id.* at 70387.
[95] For a short discussion of the rules in various federal and state jurisdictions related to revealing interested parties for the purposes of judicial recusal, see Ewing & Feldman, *supra* note 23, at text accompanying notes 200–20.
[96] USPTO Proposed Rules, *supra* note 93, at 70,386.

disclosure that would be necessary for providing full market information.

From this perspective, the Xilinx case itself is instructive. Knowing the names of the investors in the aggregator's fund did not help Xilinx determine which shell companies were the proper ones to include in the lawsuit challenging the validity of the patent.[97]

The second definition regarding ultimate parent entity specifically references the antitrust laws regarding mergers and acquisitions. In particular, the PTO references sections related to what is known as the "Hart-Scott-Rodino" threshold, which designates the point at which one must file with the Federal Trade Commission for antitrust clearance of a merger or acquisition.

Although casting a broader net than judicial recusal, the Hart-Scott-Rodino sieve is aimed at capturing large players. Information sufficient for an optimally functioning patent market, however, would be necessary for a patent regardless of whether the patent holder is a large or small player. In addition, even where anticompetitive behavior is concerned, the Hart-Scott-Rodino threshold may be ineffective in the complex patent monetization world. One can see the limitations of the traditional antitrust thresholds for modern patent monetization both in theory and in practice.

From a theoretical perspective, this author has written extensively about the way in which current antitrust doctrines might fall short in failing to measure potential rent-seeking

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[97] *See* Ewing & Feldman, *supra* note 23, at text accompanying notes 211–19.

behavior in the market for patent monetization.[98] Behavior in which patent holders pursue returns above the economic value of their patents can have a significant impact on consumer prices and consumer welfare.[99] Most important, in the context of the economics of patent litigation and modern monetization techniques, smaller groupings can have impact within a product market.

The concern, however, is more than theoretical. This author chronicled the rise of one product company that purchased a set of broadly worded patents and asserted them aggressively against competitors, as well as engaging in an expansive acquisition campaign of buying more than twenty competitors and patent portfolios in the field. None of the individual transactions, however, appears to have triggered the Hart-Scott-Rodino reporting requirements.[100] The point is simply that antitrust thresholds are unlikely to be sensitive enough to serve as the appropriate analogy for patent transparency regulations.[101]

After more than a year of public commentary, the PTO published a revised set of proposals for comments. Published in

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[98] *See* Feldman, *supra* note 7, at 303–05 (explaining, among other issues, that the market for patent monetization must be understood as a market itself, and the potential for competitors to collude within that market or to use combination mechanisms in that market to stamp out next-generation substitutes for current products).
[99] *Id.* at 304.
[100] For a detailed description, see *id.*at 288–94.
[101] In the antitrust context, European Union rules for determining whether a transfer of control has occurred are more sensitive. The test considers whether a party has achieved "the possibility to exercise decisive influence" over an undertaking. *See, e.g.*, Commission Consolidated Jurisdictional Notice Under Council Regulation (EC) No 139/2004 on the Control of Concentrations Between Undertakings, C 95 OFFICIAL J. OF THE E.U. 1, 8 (2008).

January of 2014, the new proposals move away from the notion of "real-party-in-interest" replacing that concept with a requirement to disclose who actually holds the title to the patent, as well as reporting what is termed enforcement entities, ultimate parent entities, and hidden beneficial owners. The 2014 proposals were a stronger effort to strike at the heart of the patent transparency problems.

Enforcement entities are described as those necessary to be joined in a lawsuit to have standing to enforce a patent. The rule would require disclosure of exclusive licensees in some cases. Ultimate parent entities are defined, once again, in reference to the Hart-Scott-Rodino regulatory requirements—the limitations of which are discussed above. Hidden beneficial owners are described as those who try to avoid the need for disclosure by temporarily divesting themselves of ownership rights through contractual or other arrangements.

The concept of casting the net widely to include those who are trying to hide is an important one in patent monetization. Looking only for those who temporarily divest, however, could risk missing a considerable amount of evasive behavior. Complex patent aggregation and monetization entities may be permanently designed to avoid transparency, neatly bypassing requirements related to temporary divestment. The hidden beneficial owners section does explain that the section is "designed to discourage intentional shielding of such ownership interests," language that could conceivably apply more broadly than temporary structures. Following on the heels of the "temporary divestment" language, however, the broader language could have significant difficulty standing on its own.

Calibrating the notion of hidden beneficial owners will be critical to transparency. For example, National Public Radio has reported on the shell company "Oasis Research," noting that the company distributes 90 percent of its net profits to

Intellectual Ventures. At a panel at Stanford Law School, one of the founders of Intellectual Ventures suggested that Intellectual Ventures always sues in its own name. When asked about the lawsuits filed by Oasis Research, the Intellectual Ventures founder responded that Intellectual Ventures has simply sold the assets to, and does not control, Oasis Research.[102] This perspective is an example of how entities have already structured their relationships with shell companies to obtain the financial benefits, while maintaining sufficient distance to try to avoid disclosure obligations that might be imposed in the future.

The timing requirements of the PTO 2014 proposal are seriously limited as well. Patent applicants are required to provide information at the time of filing for a patent and have an ongoing obligation to update information while the patent is pending. Once the patent issues, however, the patent holder is only required to update information when maintenance fees are due and at the time of any post-issuance proceedings before the PTO. Maintenance fees are due only three times in the twenty-year life of a patent, at three years, seven years, and eleven years.[103]

The advantage of limiting transparency requirements to these few moments lies in the lower production burden on patent-holders. Modern patent monetization takes place throughout the life of the patent, however, and occasional information does not provide the robust information necessary for an openly functioning market.

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[102] Peter Detkin, Founder, Intellectual Ventures, Panel Discussion II at the Stanford Law School Conference on Patent Trolls and Patent Reform (Mar. 21, 2014) (author on panel).

[103] *See Maintain Your Patent*, U.S. Patent & Trademark Office, http://www.uspto.gov/patents/process/maintain.jsp.

Various legislative proposals have been introduced at various times in Congress as well. These have generally focused on transparency during litigation. As described above, only a small percentage of patent demands ever reach the courthouse. Thus, although such transparency proposals are an important improvement over the status quo, their reach is limited. In addition, the Congressional proposals focus on disclosing those who have a direct financial interest in the patent at issue in the litigation, including the right to any part of the award. These proposals would benefit from reference to the securities law concepts described above, particularly in expanded form.

In short, even if the Section 16 framework is not adopted whole cloth, reference to the concepts of Section 16 may be helpful for ensuring transparency of market information in patents. Thus, the more limited proposals described above can themselves benefit from reference to those concepts, either at the time of passage by legislative and regulatory bodies or at the time of judicial interpretation. Referencing the securities regulation framework for terms such as beneficial and pecuniary interest and the avoidance language brings the wisdom of experience gained with the use of those terms across time.

V. CONCLUSION

The patent system has evolved dramatically in recent years, with the development of an active trading market for patents and the creation of complex and multi-layered structures for patent ownership. These developments impede the flow of market information that can allow participants to understand even basic issues, such as patent ownership. Such fundamental information is essential for ensuring a properly

functioning patent market, one that is as efficient as possible in its pursuit of the constitutional and legislative goals.

In choosing a method for providing such information to the market, however, one need not write on a blank slate. The provisions of the securities laws that relate to disclosure of ownership interests, particularly Section 16, provide a useful framework that could be adapted to the disclosure needs of the patent regime. As with the trading of public securities, the trading of an asset imbued with the public interest must be sufficiently regulated to ensure proper functioning of that trading market, particularly when the type of asset is so essential for companies throughout the economy.

The value of the Section 16 disclosure provisions lies in their ability to reach both strategic and financial lines. Creating market transparency for patents will require both of these elements, in light of the complexity of modern patent monetization.

The Section 16 approach also has the advantage of providing a robust body of interpretative case law. With more than twenty years of interpretation of terms such as "beneficial ownership" and "pecuniary interest," the securities regulatory framework can mitigate the uncertainty that may accompany any new regulatory regime. Although certainly not perfect, the number of issues explored and clarified would provide a head start for an analogous disclosure regime.