

August 2017

Patent Submission Policies

Ryan T. Holte

Please take a moment to share how this work helps you [through this survey](#). Your feedback will be important as we plan further development of our repository.

Follow this and additional works at: <http://ideaexchange.uakron.edu/akronlawreview>



Part of the [Intellectual Property Law Commons](#)

Recommended Citation

Holte, Ryan T. (2017) "Patent Submission Policies," *Akron Law Review*: Vol. 50 : Iss. 4 , Article 1.

Available at: <http://ideaexchange.uakron.edu/akronlawreview/vol50/iss4/1>

This Article is brought to you for free and open access by Akron Law Journals at IdeaExchange@UAkron, the institutional repository of The University of Akron in Akron, Ohio, USA. It has been accepted for inclusion in Akron Law Review by an authorized administrator of IdeaExchange@UAkron. For more information, please contact mjon@uakron.edu, uapress@uakron.edu.

PATENT SUBMISSION POLICIES

Ryan T. Holte¹

ABSTRACT

This Article focuses on the early stage of commercialization communication when a third-party inventor owns an invention protected by a patent that a manufacturer-commercializer may profit from producing—long before any allegation of infringement or litigation. These submission-review communications by unaffiliated third parties are covered by corporate policies known as “patent submission policies.” They are the figurative “front doors” to a company for any third-party inventor, crucial to the commercialization of inventions generally. Unfortunately, patent submission policies have thus far remained unstudied in legal academic scholarship.

This Article collects and analyzes the current variations of patent submission policies adopted by the largest companies within four technical industries: automotive; computer hardware; computer services; and pharmaceutical. This review reveals clear inconsistencies regarding policies: some technology firms have policies that result in clear paths for third-party inventors to submit patents, while others have policies to effectively block submissions of inventions, block third-party communications, and slam the corporate doors in the face of outside

1. David L. Brennan Associate Professor of Law and Director, Center for Intellectual Property Law and Technology, The University of Akron School of Law. Many thanks to the George Mason University School of Law for support in writing this Article through a Thomas Edison Innovation Fellowship. For comments on earlier drafts, thanks to John Duffy, Shubha Ghosh, Eric Helland, Tim Holbrook, Camilla Hrды, Jay Kesan, Zorina Khan, Scott Kieff, Megan LaBelle, Amy Landers, George Mocsary, Adam Mossoff, Lucas Osborn, Kristen Osenga, Sharon Sandeen, Mark Schultz, Chris Seaman, Ted Sichelman, Gene Quinn, V.K. Unni, Samantha Zyontz, the participants at the 2016 University of Akron School of Law IP Scholars Forum, the 2015 IP Scholars Conference at DePaul University School of Law, attendees at the 2015 SEALS New Scholars Colloquia, and the Indian Institute of Management Calcutta faculty for inviting me to workshop early drafts of this Article. Finally, many thanks to Amber Sanges and Daniel Fanning for their excellent research assistance. All rights reserved, © 2015 Ryan T. Holte. Comments welcome at ryan.holte@gmail.com.

inventors. Further, the lack of submission standards is somewhat unique as compared to other types of IP submissions—notably movie screenplays and book manuscripts—and often unique and inconsistent within specific technology industries themselves. This lack of standardization across similar firms adds to the notion that patent submission policies have thus far been insufficiently analyzed and have perhaps evolved inefficiently. With this research, many questions arise regarding a potential need for large technology firms to reevaluate their patent submission policies and open their front doors to third-party inventors.

Introduction	639
I. Patent Submission Policy Background Information.....	643
A. How Patent Submission Policies Work—A Hypothetical	643
B. The Importance of Third-Party Invention Submissions	648
1. Recent Data Regarding the Importance of External Sources of Invention	649
2. The Importance of External Innovation.....	651
C. Variations in Patent Submission Policies—Competing Business Models & Legal Advice.....	653
D. Social Impact on Inventors Regarding Patent Submission Communications.....	659
E. Background Summary—Economic Analysis of Patent Submission Policies for Patent-Submitters and Firm-Recipients.....	660
II. Intellectual Property Submission Policies in Movie Screenplay and Book Publishing Industries	664
A. The Movie Industry—Screenplay Submission Policies	664
B. The Publishing Industry—Book Manuscript Submission Policies	668
III. Historical Examples of Patent Submissions	672
IV. Descriptive Survey of Current Patent Submission Policies.....	675
A. Patent Submission Policies for Representative Companies in Each Industry	675
B. Survey of Patent Submission Policies for top Patent Litigation Defendants.....	682
C. Granted Patent Data for the Industries Surveyed.....	684

2016]	PATENT SUBMISSION POLICIES	639
	D. Patent Submission Detail from an Outlier Open Patent Submission Policy Company—Google	687
V.	Observations on Patent Submission Policy Patterns	690
	A. Observations on the Patent Submission Policy Survey	690
	B. Analysis of Google’s Patent Submission Policy Data	691
	C. Analysis of Patent Submission Policy Data to Legal Advice and Expectations.....	693
	D. Other Patent Submission Policy Issues and Implications.....	696
	Conclusion	697

INTRODUCTION

Despite much recent patent law academic research concerning alleged breakdowns in modern patent commercialization through demand letters, increased litigation, and infringement remedies, few articles focus on the pre-breakdown commercialization process and the methods or communications leading to commercialization of new inventions.² While some have analyzed third-party patent licensing intermediaries (which this Article refers to as “side doors” into companies),³ thus far, no recent research focuses on direct inventor-to-

2. *E.g.*, Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 461 (2011) (regarding background information on NPEs and the general “patent troll” debate); Kristen Osenga, *Formerly Manufacturing Entities: Piercing the Patent Troll Rhetoric*, 47 CONN. L. REV. 435, 442 (2014) (discussing the birth and expansion of patent trolls); Ryan T. Holte, *Trolls or Great Inventors: Case Studies of Patent Assertion Entities*, 59 ST. LOUIS U.L.J. 1, 5-10 (2014) (summarizing the academic discussion for and against non-practicing entities); Colleen V. Chien, *Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents*, 87 N.C.L. REV. 1571, 1577, 1587 (2009) (citing Michael J. Meurer, *Controlling Opportunistic and Anti-Competitive Intellectual Property Litigation*, 44 B.C. L. REV. 509, 521 (2003)) (explaining that “the strategic use of patent litigation by well-established large companies . . . has been called predatory”); Caroline Coker Coursey, *Battling the Patent Troll: Tips for Defending Patent Infringement Claims by Non-Manufacturing Patentees*, 33 AM. J. TRIAL ADVOC. 239, 241 (2009).

3. *E.g.*, Ted Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341, 366 (2010); Nathan Myhrvold, *Funding Eureka!*, 88 HARV. BUS. REV. 40, 47-50 (2010) (discussing the need for growth in the “invention capital market and industry”); Allen W. Wang, *Rise of the Patent Intermediaries*, 25 BERKELEY TECH. L. J. 159, 165 (2010) (explaining that “[t]he majority of [patent] intermediaries focus on connecting parties that wish to monetize existing patent rights . . .”); B. Zorina Khan, *Trolls and Other Patent Inventions: Economic History and the Patent Controversy in the Twenty-First Century*, 21 GEO. MASON L. REV. 825, 832 (2014) (“[I]ntermediaries have the ability to reduce the costs of search and exchange, enhance liquidity,

commercializer communications, or “front doors” into companies. This Article fills that gap.

The subject of this Article is on the early stage of commercialization communication, when a manufacturer has not infringed the patent rights of a third-party inventor—as the manufacturer does not have knowledge of the invention—but a third-party inventor owns an invention protected by a published patent⁴ that the manufacturer may profit from producing or incorporating into an existing product. These “front door” submission-review communications, pre-production and pre-commercialization, from third parties to manufacturers/commercializers, are covered by corporate policies known as “patent submission policies.”⁵ They are also sometimes encompassed as part of broad “idea submission policies.”⁶ As they relate to patent submissions directly between patent owners and commercializing firms, this paper refers to them synonymously as

improve market depth and breadth, and increase overall efficiency.”); Stephen H. Haber & Seth H. Werfel, *Why Do Inventors Sell to Patent Trolls? Experimental Evidence for the Asymmetry Hypothesis* 4 (Stan. Univ. Hoover Institution Working Group on Intell. Prop., Innovation, and Prosperity, Working Paper No. 15009, 2016) (discussing how patent assertion entities act as intermediaries in patent markets and improve the efficiency of markets by reducing transactions costs, resulting in asymmetric information, and providing liquidity), http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2552734; Andrei Hagiu & David B. Yoffie, *The New Patent Intermediaries: Platforms, Defensive Aggregators, and Super-Aggregators*, 27 J. ECON. PERSPECTIVES 45, 46 (2013) (discussing how patent intermediaries are now providing unique “platforms . . . [and] services for buying and selling patents”); *see also infra* text accompanying note 27 (discussing the role of “side door” patent intermediaries).

4. The emphasis for legal protection is that the patent (or pending patent application) defines the IP boundaries claimed and the invention detail is public so not capable of being protected by trade secret rights. *See infra* Part I.A.

5. *See, e.g., Submit a Patented Product Idea, Legal Requirements Before Submission*, 3M, http://solutions.3m.com/wps/portal/tut/p/a0/04_Sj9CPykssy0xPLMnMz0vMAfGjzOKDvDwsQ02NjA3cXY1dDYx8XJ3dQlwCTZyCTPWDU_PiQ4P1C7IdFQG7XoY-/ (last visited Apr. 21, 2017) (“3M has a two step process for you to submit a Patented Idea to us for evaluation. You must use this process to submit a Patented Idea, and any other communications by telephone, e-mail, postal service, overnight mail or personal contact will be redirected to this process . . .”).

6. *See, e.g., Policy on Ideas Submitted by Persons Outside the Company*, PELICAN, http://img.pelican.com/docs/terms-and-conditions/Pelican_idea_submission_policy.pdf (last visited Apr. 21, 2017) (“After you have read this policy, read the enclosed Idea Submission Agreement. If this Agreement is acceptable to you, please fill in the blanks, sign it, and return to us.”). Given the lack in similarities between formally protected IP (such as patents and copyrights) and more-amorphous ideas, one would expect corporate intake and review procedures to be significantly different. However, this is often not the case. Policy considerations for generally unprotected ideas should be different. *See* Arthur R. Miller, *Common Law Protection for Products of the Mind: An “Idea” Whose Time Has Come*, 119 HARV. L. REV. 703, 731 (2006) (The law protecting ideas shares certain qualities with the federal protection of copyrights and patents, but some of these similarities, such as concreteness and novelty, “simply are too far removed from and do not focus attention on the competing policies and basic issues that should be the centerpiece of idea cases.”).

“patent submission policies.”

Among other things, patent submission policies invite, or block, third-party submission of invention ideas, patent applications, or patents. They are the figurative “front doors” into a company for any third-party inventor, which are crucial to the commercialization of inventions generally. Indeed, a 2014 National Bureau of Economic Research (NBER) paper found that 49% of American manufacturing firms report that their most important new products originate from outside sources, notably customers, suppliers, and technology specialists.⁷

This Article collects and analyzes the variations of patent submission policies adopted by the largest companies within four technical industries: automotive, computer hardware, computer services, and pharmaceutical. When reviewing these policies, this Article’s focus and analysis is only on the potential submission of patent-protected or patent-pending inventions originated by a third party with no affiliation to the commercializing firm. The policies are separated into one of three categories in the results tables: (1) “open patent submission” policies—allowing patent submissions; (2) “no patent submissions” policies—blocking all patent submissions; and (3) “no policy”—no stated policy found regarding patent submissions. In addition to researching individual policies, each industry is further reviewed to extract general and industry-specific patterns. These patterns are then compared to other industry data, patent data, and other IP-submission standards, specifically book manuscript submissions and movie/TV screenplay submissions.

The review of current corporate patent submission policies reveals clear inconsistencies. While some technology firms have standards that result in clear paths for third-party inventors to knock on corporate front doors with patent submissions,⁸ others have standards to effectively

7. Ashish Arora, Wesley M. Cohen & John P. Walsh, *The Acquisition and Commercialization of Invention in American Manufacturing: Incidence and Impact* 4 (Nat’l Bureau of Econ. Research, Working Paper No. 20264, 2014), <http://www.nber.org/papers/w20264>. This 49% “new product” number includes 24% of acquired inventions that were patented by the source before becoming new products, with over half of those patented by independent inventors. *Id.* at 16; *see also* Part I.B.1.

8. *E.g.*, *Guideline for the Handling of Submitted Ideas*, PFIZER, https://www.pfizer.de/fileadmin/content/pfizer.de/pdf/ueber_pfizer/about_pfizer_handling_of_submissions_policy_en.pdf (last visited Apr. 21, 2017) (“To protect the interests of both yourself and Pfizer, it is preferred that you consult with an attorney regarding the legal avenues available to protect your idea prior to submission. There may be several options of protection available for your idea prior to submission. Although not recommended, you of course, have the option of submitting an idea without the advice of an attorney. . . . Any submission that you may make to Pfizer is made voluntarily and does not contain any confidential information. . . . Your submission does not obligate Pfizer to adopt your

block submissions of patents, block third-party communications, and slam corporate doors in the face of outside inventors.⁹ The lack of submission standards are somewhat unique as compared to other types of IP submissions and often unique and inconsistent within specific technology industries themselves.¹⁰ This lack of standardization across similar firms adds to the notion that patent submission policies have thus far been insufficiently analyzed and have perhaps evolved inefficiently.¹¹ They are also in stark contrast to the strong open patent submission policies technology-driven nineteenth century firms utilized.¹² With this research, many questions arise—perhaps if early-innovator patent submissions were not shut-out, then later manufacturer infringement would be less likely, and future patent litigation could be reduced? In short, is the litigation and patent “trolling” certain industries complain about something they may be directly contributing to years before any litigation?

This Article is organized as follows. Part I introduces patent submission policies and discusses how they relate to general idea submission policies and other corporate IP policies. It goes on to discuss the importance of third-party innovation to commercializing firms, standard legal advice given to firms regarding patent submissions, and the social impact on inventors regarding policy communications. Part II examines IP submission policies for the movie-screenplay industry and the book publishing industry, before Part III introduces historical examples of patent submission policies for large technology companies in the late nineteenth century and early twentieth century. Part IV presents the unique data gathered on large firm patent submission policies, as well as overlapping industry data on patent density, patent

ideas or pay any monies for any use thereof unless and until such obligation is expressed in a formal written contract with Pfizer.”).

9. *E.g.*, *Privacy, Cookies and Legal Disclaimer*, NOVO NORDISK, <http://www.novonordisk.com/utills/disclaimer.html> (last visited Apr. 21, 2017) (“Any questions, comments, suggestions or any other communications, including any ideas, inventions, concepts, techniques or know how you may forward to this site or otherwise to Novo Nordisk, electronically or by any other means, are on a non-confidential basis and will become the property of Novo Nordisk, which Novo Nordisk without restriction may use in any fashion and for any purposes whatsoever including developing, manufacturing and/or marketing goods or services.”).

10. *See infra* Part IV. The exception to this is that the laws protecting general “idea submissions” is similarly varied and likely a hurdle to innovation commercialization in the non-patent marketplace. Miller, *supra* note 6, at 714, 778 (reviewing the marketplace for idea submissions and noting that “the market for ideas is more lucrative, populated, demanding, and varied than ever before” but that “few legal theories available to offer protection, however, are confused and complicated”).

11. *See infra* Part V.

12. *See infra* Part III.

litigation, and detailed results from Google's 2015 direct patent submission Patent Purchase Program. Finally, Part V analyzes the industry variations in patent submission policies, and the detailed submission data from Google, before comparing the data with the legal assumptions surrounding patent submission policies and the non-patent and historical submission policies discussed earlier. Part VI concludes.

I. PATENT SUBMISSION POLICY BACKGROUND INFORMATION

A. *How Patent Submission Policies Work—A Hypothetical*

To introduce and explain the importance and uses of patent submission policies, this Part begins with a brief hypothetical scenario regarding an independent inventor with a patent-protected invention. While a hypothetical inventor, all corporate policies cited are real and actively enforced.

Consider a community college professor with a PhD in electrical engineering teaching introductory engineering courses at a small college in a rural part of the United States. The professor does not have a large lab for research, nor direct contact with any operating business, but enjoys tinkering in the student labs with practical solutions to unique problems encountered in daily life. One side project includes a few months spent perfecting an electrical cooling device. The professor hopes the device will run on very low power and be able to keep a vehicle seat bottom cool in the summer months. After considerable personal time spent tinkering, a breakthrough in experimentation occurs resulting in a very low power cooling device to install in any car seat.

The professor concludes that the small low power electrical cooling device would be of interest to many companies in a variety of applications. The professor knows preparing the device for manufacturing will take much work and personal cost but thinks the future profit potential would make it worth the effort. After additional research time and expense while keeping the invention a secret, the professor consults a patent attorney to secure rights in the invention. A patent application is filed and the attorney gives clearance to discuss the idea with others.

The professor goes through additional work and expense to create a business entity, website, and advertisements for the invention. Given the functionality of the electrical cooling device in a car, and rave reviews from passengers, the professor first contacts large automobile manufacturers—General Motors and Ford—to submit the invention and

details. The professor reviews the idea and patent submission policy websites of both auto manufacturing companies to find a welcome invitation:

The General Motors' New Devices Section provides our customers and friends who are not General Motors employees with an opportunity to submit ideas, inventions and suggestions¹³

Ford New Ideas/Innovation Office . . . This site is available for you to submit certain non-confidential ideas to Ford Motor Company. In order to be considered, submissions must relate to products, features or function.¹⁴

The professor further learns that the companies will not keep the idea a secret, but this is not a problem since a patent application has already been filed:

Receipt by GM of this submission or any prior or subsequent related submission creates no obligation whatsoever on the part of GM, whether legal, implied or otherwise (whether of confidentiality, compensation, return, use, not use or otherwise). This submission and any prior or subsequent related submission to GM are not confidential. GM will have no confidentiality obligations whatsoever with respect to this or any prior or subsequent related submission to GM.¹⁵

Similarly, if you desire to keep your information confidential, do not disclose it to Ford:¹⁶

Please do not submit confidential information. Ford will not keep your idea confidential, as your idea will be copied and distributed to many people at Ford for evaluation. We do not wish to make your idea public, but there are a large number of Ford specialists that may review the idea, and it may be discussed with individuals outside of the company. If you would like to keep your materials confidential, do NOT send them to us. WE WILL NOT REVIEW CONFIDENTIAL INFORMATION.¹⁷

The professor also notes that the websites actually direct submitters to

13. *General Motors' New Devices Section*, GENERAL MOTORS, <http://www.gmideas.com/gmideas/ideas?action=NewIdea> (last visited July 19, 2015).

14. *Ford New Ideas/Innovation Office*, FORD, <https://corporate.ford.com/innovation/innovation-ideas-submission2.html> (last visited Apr. 21, 2017).

15. GENERAL MOTORS, *supra* note 13.

16. FORD, *supra* note 14.

17. *Idea Submission Rules*, FORD, <https://corporate.ford.com/innovation/ideas-submission-rules.html> (last visited Apr. 21, 2017).

seek legal advice and patent protection for the invention:

I am aware that under the law of the United States and most foreign countries, I may be able to protect my ideas through, for example, applications for patents, trademarks, or copyrights, or by maintaining my ideas as a “trade secret” by protecting them from non-confidential disclosure. I am aware that making submissions to GM may limit my ability to protect my ideas.¹⁸

You should appreciate that a non-confidential disclosure of any inventive part of your idea to others (such as Ford) prior to obtaining a patent may result in loss of potential patent rights in most countries of the world. So, we strongly recommend that, before you present your idea to us, you consult a patent attorney for professional advice. The costs involved in obtaining such advice are your sole responsibility.¹⁹

The professor submits the invention detail via the GM and Ford web portals and goes on to submit the patent-pending invention to other auto manufacturers, who generally have similar patent submission policies as part of their corporate policy webpage.²⁰ Over a year later, after negotiations with the auto manufacturers and the patent issuing, the professor contracts to non-exclusively license the invention. The professor is happy to profit from licensing the invention, and the auto manufacturers are happy they are able to license and manufacture a new feature into the latest model cars. Future passengers are happy their seats will be cool.

After much success with the auto manufacturers, the professor considers additional uses for the low power electronic cooling device. In addition to automotive interior cooling applications, there is valuable application in personal computers. The professor perfects application of the invention for laptop CPU cooling and begins the same process of contacting manufacturers. The professor investigates the websites of top laptop manufacturers—Apple and Samsung—but finds their patent submission policies to be very different than GM and Ford. Both computer companies imply that they do not wish to receive *any* product-related submissions, including patents:

Apple or any of its employees do not accept or consider unsolicited ideas, including ideas for . . . new or improved products or technologies, product enhancements, processes, materials, marketing plans or new product names. Please do not submit any unsolicited

18. GENERAL MOTORS, *supra* note 13.

19. FORD, *supra* note 14.

20. *See infra* Part IV.

ideas . . .²¹

Samsung's long-standing company policy does not allow it to accept or consider creative ideas . . . product improvements, suggestions for technologies, methods, techniques, processes, inventions, marketing plans, or any materials . . .²²

The professor further reads on the computer company websites that any submission will result in the company claiming rights to be free to use the invention without any compensation:

TERMS OF IDEA SUBMISSION

You agree that: (1) your submissions and their contents will automatically become the property of Apple, without any compensation to you; (2) Apple may use or redistribute the submissions and their contents for any purpose and in any way . . .²³

Any Submission may be used by Samsung without restriction for any purpose whatsoever, including, without limitation, reproduction, disclosure . . . and you hereby irrevocably waive, release and give up any claim that any use of such Submission violates any of your rights, including, without limitation, copyrights, trademarks, patents . . . or other property rights . . . or right to credit for the material or ideas. Samsung . . . is irrevocably granted the right, but not the obligation, to reproduce, modify, adapt, publish . . . post, sell, translate, incorporate, create derivative works from, distribute and otherwise use the Submission . . . without according you any compensation or credit.²⁴

The professor consults an attorney regarding Apple's and Samsung's patent submission restrictions, which are generally standard for all other computer manufacturers.²⁵ The attorney confirms the legal risks when inventors submit patents to companies that make clear outside inventors will not be compensated for invention submissions.²⁶ The professor asks

21. *Unsolicited Idea Submission Policy*, APPLE, <https://www.apple.com/legal/intellectual-property/policies/ideas.html> (last visited Apr. 21, 2017).

22. *Legal*, SAMSUNG, <http://www.samsung.com/us/common/legal.html> (last visited Apr. 21, 2017).

23. APPLE, *supra* note 21.

24. SAMSUNG, *supra* note 22.

25. This industry does have some minor exceptions. See all policies *infra* Part IV.

26. Given that the online no patent submission policies are not restricted to online submissions, if not otherwise waived, any submission could be argued as governed by the policy if read by a third-party inventor prior to submission. *But see* *Burten v. Milton Bradley*, 763 F.2d 461, 465 (1st Cir. 1985) (noting that where a "disclosure agreement contain[ed] no explicit language regarding waiver of a confidential relationship" and "convey[ed] an ambiguous message as to whether the agreement covered confidential relationships," the waiver did not overcome implied at law duty of confidentiality between game inventor and toy manufacturer).

what options there may be for future commercialization of the invention in computers. The attorney explains that the professor may: (1) communicate to a third-party patent intermediary who can assist with patent licensing for a fee;²⁷ (2) attempt to find smaller computer product suppliers who already have established licensing relationships with Apple and Samsung and have open patent submission policies;²⁸ (3) wait for the manufacturers to discover the patent application and contact the professor for a license; or (4) monitor the manufacturers to see whether they begin to use the invention and then send a license demand letter threatening litigation if the patent is not licensed. The professor is discouraged Apple and Samsung have potentially delayed advancements in their computer-cooling technologies, and the public has missed an opportunity for a great advancement in personal computing devices.

While this fictional invention and invention-submission scenario oversimplifies the processes and legal business decisions surrounding patent submission policies, the patent submission options available to third-party inventors are reality. In one industry, inventors are generally welcomed, invited, and even promoted to seek patent protection for inventions and then to submit the inventions. In other industries, inventors are discouraged from submitting inventions, given no information regarding patent protection, and told to confirm a contract of adhesion pronouncing that if any invention idea is submitted it can be used for free by recipient companies no matter what property protection covers it. A recent non-fiction example of this conflict was discussed in a 2014 New York Times article noting that when the University of Wisconsin contacted Apple regarding patented technology to “help speed the processing time of several versions of the iPhone . . . Apple sent the [university] a link to a page on the Apple website, which says

27. As this paper concerns only direct inventor to manufacturer/commercializer communications (“front doors”), the option of inventors communicating with third-party patent intermediaries (“side doors”) is not addressed. There are a variety of third-party patent intermediaries including patent aggregators, patent merchant banks, and patent holding companies. Detailed discussion regarding those commercialization options will be contained in a future article.

28. This secondary submission option is discussed *infra* in the context of subsidiary companies that indirectly accept patent submissions but are legally and technically walled from their corporate parents. In the case of a completely separate supplier-firm, no comprehensive analysis can be made given the countless supplier options for large commercializing firms. *See, e.g.*, Supplier List, APPLE (Feb. 2016), <https://www.apple.com/supplier-responsibility/pdf/Suppliers.pdf> (detailing over 200 suppliers as a partial list “for materials, manufacturing, and assembly of our products worldwide in 2015”). The analysis provided in this paper does not change, however, given the focus on direct communications between patent owners and commercializing firms (which a secondary supplier company would not be).

that the company can lay claim to any unsolicited idea.”²⁹ In the end, Apple stole the patented invention and the university successfully sued—“what choice did it have?”³⁰ Similar examples are widespread.³¹

While many types of intellectual property protections can cover ideas, the focus of this Article is on submission of patent-protected or patent-pending invention ideas originated by a third party with no affiliation to a potential manufacturing-commercializing company. With this focus, inventions that are not patent-protected, not patent-applied, subject to confidentiality agreements, intended to be protected by trade secrets, and similar, are excluded. Communications regarding licensing demands, or threats of litigation, for manufacturers who are already allegedly infringing patent rights are also excluded. The goal of this analysis is to focus on what options third parties have in furtherance of patent-covered invention commercialization long before any infringement or disputes arise between the parties.

B *The Importance of Third-Party Invention Submissions*

Communications regarding inventions play an integral role in firm

29. Joe Nocera, *The Patent Troll Smokescreen*, N.Y. TIMES, Oct. 24, 2014, at A3; Complaint at 4, Wis. Alumni Research Found. v. Apple, Inc., 135 F. Supp. 3d 865 (W.D. Wis. 2015) (No. 14-cv-0062) (“Apple has stated that it is the policy of the company not to accept or consider proposals regarding licensing from outside entities like WARF for any purpose, making the initiation of this lawsuit a necessity.”).

30. Nocera, *supra* note 29, at A3.

31. One such example is the well-known story of Robert Kearns who invented and obtained a patent on the intermittent windshield wiper controller in the 1960s while working as a Detroit University engineering instructor. He approached a number of automobile manufacturers, who sought detailed technical information on his invention but were ultimately uninterested. Years later, when Ford Motor Co. and Chrysler Co. began manufacturing wipers using the technology of his invention, Kearns filed suit. Ultimately, he was awarded over \$30 million for infringement of his patent. See Reed Johnson, *The Cantankerous Man Behind the Wipers*, L.A. TIMES (Oct. 3, 2008), <http://articles.latimes.com/2008/oct/03/entertainment/et-kearns3>. The Kearns story is well known due to the 2008 FLASH OF GENIUS motion picture (Universal Pictures). Another example is the story of Trenton Industries, in which “a Michigan plaintiff [who] developed a new model folding chair and turned over a specimen chair to a middleman-broker so the latter could find someone interested in manufacturing the chair. At this time the chair was not patented, but the plaintiff was later granted a patent. The middleman took the chair to the defendant, a California company, and indicated to defendant that he was interested in negotiating an agreement between plaintiff and defendant whereby defendant would manufacture the chair on a royalty basis. The defendant took the chair and kept it two months. Defendant’s staff carefully examined it, photographed it, and then returned it, indicating they were not interested. Shortly thereafter, the defendant marketed a chair which embodied some of the features of plaintiff’s chair.” See generally Trenton Indus. v. A. E. Peterson Mfg. Co., 165 F. Supp. 523 (S.D. Cal. 1958); see also Ryan T. Holte, *Trolls or Great Inventors: Case Studies of Patent Assertion Entities*, 59 ST. LOUIS U.L.J. 1 (2014) (describing case studies of two PAEs who both attempted to present patented inventions to operating companies only to be shut out from licensing and later have their patents infringed).

expansion and the specialization of third-party inventors to invent. This subpart details recent data regarding external sources of innovation as well as previous work regarding the value of outside invention to manufacturing firms.

1. Recent Data Regarding the Importance of External Sources of Invention

A June 2014 National Bureau of Economic Research report found that between 2007 and 2009, 49% of U.S. manufacturing firms that innovated (introduced a new product to market) reported that their “most important new product originated from an identified outside source, suggesting pervasive reliance upon external sources of invention.”³² The report further detailed that customers were the “single most likely source of external invention” for outside innovation, followed by suppliers.³³

The NBER report noted specific examples of tangible innovations in sampled industries. Examples include:

Food—Live active cheese with probiotics
 Textile—Heat resistant yarn
 Paper—Low surface energy light tapes
 Chemicals—Biosolvents
 Pharmaceutical—Oral gallium to prevent bone decay
 Metals—Nanofolios
 Electronics—20-h IPS Alpha LCD panel

32. Arora, Cohen & Walsh, *supra* note 7, at 4. For an additional survey of international executives regarding the importance of external ideas to firm success, see Nigel Adams, *Innovation Beyond the Four Walls: Breaking the Innovation Barriers*, COGNIZANT BUS. CONSULTING, FORBES INSIGHTS (Apr. 2012), <http://www.cognizant.com/SiteDocuments/Innovation-Beyond-the-Four-Walls.pdf>. That report “is based on a survey of 311 executives.” *Id.* at 4. Specifically:

Almost half of the executives (153) came from the United States, and the rest were from Europe. They represented all major industries, including manufacturing (62), technology (49), professional services (28) and financial services (21). The respondents’ companies’ had at least \$1 billion in revenues, with roughly a third with revenues between \$1 billion and \$5 billion, a third with revenues of \$5 billion to \$10 billion, and the rest with revenues over \$10 billion.

Id. That report concluded:

Although it is complex to achieve, . . . a hybrid approach—where companies rely almost equally on internal versus external resources—is a predominant form of resource usage, with almost half of executives surveyed for this report saying their companies are hybrids. Hybrids are defined as companies that use the 40/60 to 60/40 ratio of internal versus external resources for innovation.

Id. at 7.

33. Arora, Cohen & Walsh, *supra* note 7, at 13.

Semiconductors—Linear voltage regulators³⁴

As might be expected given the technical nature of the outside innovations, respondents to the NBER survey reported that 24% of the inventions acquired from the outside were patented by the source, and 56% of inventions originating from outside independent inventors were patented (the most frequently patented).³⁵

The NBER report further included data related to respondents' uses of communication "channels for acquiring the invention from the outside."³⁶ For the purposes of this Article it is unclear which channel a patent-protected open patent submission communication from a third-party inventor would be covered.³⁷ Of note is that 69% of inventions sourced via licensing (from all sources) were reported to be patented, compared to only 13% sourced through joint ventures or cooperative research and development (R&D); patents are integral to innovation-input communications.³⁸

Regarding the importance of patents to innovation and new products to market, the report concluded that "patents facilitate market transactions in technology."³⁹ For certain types of inventors, including independent inventors, patents appear to be much more important.⁴⁰ Finally, the report discussed the disparity between the size of firms and the type of third-party innovators they generally work with, noting that "independent inventors appear to disproportionately favor small firms . . . suggest[ing] that large firms may be missing an interesting opportunity [to acquire new inventions]."⁴¹

34. *Id.* at 10.

35. *Id.* at 16 (independent inventors: 56%; universities: 36%; suppliers 34%; customers: 16%).

36. *Id.* at 16.

37. Given that the "informal" channel includes products created through reverse engineering, and "independent inventors" are listed under "market channels," it can be assumed that patent submission communications would fall into a variety of channels depending on how the intellectual property was eventually obtained (e.g. licenses, purchased, acquiring a separate entity, etc.). *Id.* at 19.

38. *Id.* at 18; *see also* Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 277-78 (1977) (discussing how patents facilitate technology transactions better than other types of intellectual property).

39. Arora, Cohen & Walsh, *supra* note 7, at 18.

40. *Id.* at 32.

41. *Id.* at 32 n.29 (citing M. Edwards, F. Murray & R. Yu, *Gold in the Ivory Tower: Equity Rewards of Outlicensing*, 24 NATURE BIOTECH. 509, 509 (2006)) (The Report further notes "[a] different interpretation is that small firms act as a bridge between independent inventors and larger firms, who may find it too costly to deal with independent inventors. Indeed in biopharmaceuticals, biotech firms function as a bridge between university-based inventors and large pharmaceutical

2. The Importance of External Innovation

The NBER report's empirical data is not surprising as the economic theory/background research noted the following:

When the firms best equipped to invent are not necessarily the firms most capable of commercializing invention, society benefits when rights over an invention can transfer between them [in what is called] 'the division of innovative labor.' Economic theory, starting with Adam Smith, further suggests that such a division of innovative labor should also confer system-wide efficiencies through increases in specialization.⁴²

Many other legal scholars and economists have also written extensively regarding the importance of outside innovation for the creation of valuable commercial products produced by operating firms. One champion of outside inventive activity is organizational theorist Henry Chesbrough, who coined the term "open innovation."⁴³ Chesbrough's "open innovation" generally refers to firms using external and internal ideas, and internal and external paths to market, as the firms look to advance technology. His theory revolves around firms expanding their innovative activity in, and innovative activity out, to third parties. Regarding intellectual property protected ideas specifically, Chesbrough writes:

[I]ntellectual property represents a new class of assets that can deliver additional revenues to the current business model and also point the way toward new businesses and new business models. Open innovation implies that companies should be both active sellers of IP (when it does not fit their own business model) and active buyers of IP (when external IP does fit their business model).⁴⁴

In *Open Innovation*, Chesbrough cites specific examples of companies developing internal technology that does not fit their current business model but eventually becomes a spin-off entity, often times exceeding the market value of the parent firm.⁴⁵ Conversely,

firms.”).

42. *Id.* at 2.

43. Henry Chesbrough, *Open Innovation: Where We've Been and Where We're Going*, 55 RESEARCH-TECH. MGMT. 20, 20 (2012).

44. *Id.* at 24.

45. *Id.* (“I tracked 35 projects that started inside of Xerox’s labs and got to a certain level of development, when internal funding was stopped. I was curious about what happened to these projects subsequently, because in many cases Xerox encouraged the employees working on them to leave and take them to the external market. Once these people left the lab, budget was freed up for something that was more strategic and promising for the company’s core business. One of the things

Chesbrough's open innovation principles equally apply to innovation and patents entering a firm—buying outside patents for existing business models to advance and expand existing technology.⁴⁶ Regarding individual inventors specifically, a 2015 article by economist Eric von Hippel and patent law professor Andrew Torrance agrees with this value of innovation to operating firms: “the innovations individuals create often diffuse to . . . firms that may adopt them as the basis for valuable commercial products offered on the market[;] . . . [t]his innovation activity is of great benefit to the individuals involved, and to national economies as well.”⁴⁷

Finally, in an effort to not only be open to third-party innovation, but actually promote it, some companies have adopted prize/award policies to encourage outside innovation within firm business areas.⁴⁸ In a 2012 article entitled *Crowdsourcing Based Business Models: In search of Evidence for Innovation 2.0*, three RAND Corporation economists considered “open innovation trajectories over time,” analyzing corporate outsourcing where publicized financial rewards promote third parties to solve challenges operating companies perceive as “too high-risk.”⁴⁹ Two

I discovered was that most of the 35 projects subsequently failed. But a few of them succeeded and actually became publicly traded companies; the combined market value of those publicly traded spin-off entities substantially exceeded Xerox's own market value.”).

46. In *Managing Intellectual Capital*, David Teece notes that larger commercializing firms are those best suited for licensing patents from the outside to exploit new innovation. DAVID TEECE, *MANAGING INTELLECTUAL CAPITAL* 135 (2002). “Patent-only licenses are taken generally by firms that already possess the capabilities to exploit innovation.” *Id.* “Often, the individual(s) or firm(s) which supply the necessary complimentary assets and skills needed in order to commercialize the invention, or which takes the necessary risks, are not the same as the inventor. The inventor provides the idea and possibly a prototype; others—manufacturers, distributors, etc—may provide the wherewithal needed to bring that idea to fruition. The owners of all the assets involved need to share the gains in order to supply goods or services, or to be willing to bear risks. This implies that the innovator (when it licenses its intellectual property) and the owners of complimentary assets will typically split the gains from innovation in some fashion.” *Id.* at 151.

47. Andrew W. Torrance & Eric von Hippel, *The Right to Innovate*, 2015 MICH. ST. L. REV. 793, 795 (2015).

48. These individual-company prize programs are not to be confused with patent-system-competing prize policies by governments or non-commercial groups to promote innovation generally. See Zorina Khan, *Inventing Prizes: A Historical Perspective on Innovation Awards and Technology Policy* 8-9 (Nat'l Bureau of Econ. Research, Working Paper No. 21375, 2015), <http://ssrn.com/abstract=2633331> (discussing innovation award policies and concluding: “Prizes tended to offer private benefits to both the proposer and the winner, largely because they served as valuable advertisements, with few geographical spillovers. Winners of such awards were generally unrepresentative of the most significant innovations, in part because the market value of useful inventions would typically be far greater than any prize that could be offered by private or state initiative. Even prestigious and well-funded institutions such as the Royal Society of Arts failed to develop truly valuable inventions”).

49. Sonja Marjanovic, Caroline Fry & Joanna Chataway, *Crowdsourcing Based Business*

examples of success include: (1) Innocentive (founded by Eli Lilly and spun-off in 2005) offering cash awards to solvers of innovation challenges and resulting in the development of a water purification system alert;⁵⁰ and (2) the Canadian gold mining group Goldcorp offering geological survey data to the public, along with a large cash prize, to anyone who could analyze the data and suggest places where gold could be found.⁵¹ While the article concluded that more research is needed to understand the true risks and benefits of a crowdsourcing based business model, the examples discussed in high-technology areas of research further support the importance of third-party innovations and communications regarding those innovations to commercializing firms.

C. *Variations in Patent Submission Policies—Competing Business Models & Legal Advice*

In *Relentless Innovation* and other writings, Fortune 500 consultant Jeffrey Phillips⁵² describes competing policies of innovation as “ships versus castles.”⁵³ “Castles” defend specific areas like harbors or

Models: In Search of Evidence for Innovation 2.0, 39 SCI. & PUB. POL’Y 318, 318 (2012).

50. See *id.* at 325 (“A classic example of an Innocentive-brokered problem solved in 2010 was a Rockefeller-sponsored challenge to create an indicator that gives a visual sign of water that has been exposed to a sufficient dose of sunlight or UV-light for disinfection. This was developed for use in developing countries where drinking water is scarce. The prize for this challenge was US\$40,000 and was awarded to a group of graduate students from the University of Washington.”).

51. See *id.* at 325-27 (“Twenty five semi-finalists received US\$10,000 each, and from these semi-finalists the top three proposals (in ascending order) were awarded US\$75,000, US\$80,000 and US\$95,000 in prize money. This two-stage process eliminated a certain risk for solvers (so that they did not invest too much in the process without some sort of reward) and for the seeker, so that they had a manageable number of full proposals. More than 1,400 individuals and teams from 50 countries registered to enter the competition. The contest produced 110 targets, half of which the company had not previously identified, over 80% of which proved productive, yielding 8 million ounces of gold, worth more than US\$3 billion. The top prize was won by a small consultancy in Australia.”).

52. Jeffrey Phillips is a senior consultant with innovation consultants OVO Innovation, a consulting and training firm working primarily with Fortune 500 firms. He is the author of three books regarding innovation and the *Innovate on Purpose* blog. *About the Author: Jeffrey Phillips*, AMAZON BOOKS, <https://www.amazon.com/Jeffrey-Phillips/e/B002BMGAK4> (last visited July 28, 2017).

53. See generally JEFFREY PHILLIPS, *RELENTLESS INNOVATION: WHAT WORKS, WHAT DOESN’T—AND WHAT THAT MEANS FOR YOUR BUSINESS* (1st ed. 2011); Jeffrey Phillips, *Ships and Castles, Ports and Plains*, OVO INNOVATION: INNOVATE ON PURPOSE (Sept. 14, 2009), <http://innovateonpurpose.blogspot.com/2009/09/ships-and-castles-ports-and-plains.html> (“[T]here is so much evidence that many firms take a ‘castle’ approach to innovation. That is, they stake out their ground and protect it with a castle, occasionally leaving the castle to do battle in the nearby country. A castle is great for defense, but it suggests a reactive, defensive mindset, where the walls of the castle become an inhibitor to growth and new ideas. Ships, on the other hand, are primarily offensive in nature and are meant to explore new waters and new oceans. Ships ‘project’ power and

important waterways. From a business standpoint, “castles” enable companies to discourage those who would attack and help organizations be selective of who they allow in. “Castles” have a significant disadvantage though—they cannot move. In contrast, “ships” enable new opportunities including exploration and trade. For businesses, “ship” strategies increase the chances of new opportunities but are more costly to operate because they require ongoing refurbishment and specially trained crews.⁵⁴ Phillips uses these policy metaphors to explain how some businesses follow a “castle mentality”—designed to defend internal knowledge, confidential information, or intellectual property at the cost of missing new opportunities.⁵⁵

The “castles versus ships” metaphor likewise applies to corporate patent submission policies. Open patent submission policies, like ships, encourage greater collaboration and chances to enable new business opportunities. Open patent submission policies do, however, require greater resources for corporate departments to receive and review ideas submitted as well as specially trained employees to handle the ideas submitted within the best legal procedures. No patent submission policies, on the other hand, support a defensive business mentality designed to discourage communication from outsiders and protect internal intellectual property much like castles. No patent submission policies are also generally cheaper than increasing specialized resources to review new inventions. The concern about strict no patent submission policies, however, as with strict “castle” mentalities, can be great. Indeed, Phillips concludes his advice to Fortune 500 firms as follows:

There’s a lesson in this for all of you in Fortune 500 firms who have suffered from . . . budget cuts. As you have less and less interaction with customers, prospects, business partners and others who may introduce new ideas and influence your thinking, you will have fewer ideas. Additionally, without the interaction of a number of different people and perspectives, your frame of reference will shrink and you’ll concentrate more on safe, simple ideas. It is not impossible to innovate without interacting with others, but rich interaction . . . adds so much

influence and explore or discover new things and new places. Clearly, a combination of ships and castles is probably the ultimate defensive/offensive strategy, and lends itself well to innovation thinking as well.”).

54. See generally PHILLIPS, *supra* note 53; Phillips, *Ships and Castles, Ports and Plains*, *supra* note 53.

55. See generally PHILLIPS, *supra* note 53; Phillips, *Ships and Castles, Ports and Plains*, *supra* note 53.

to your perspectives and your thinking.⁵⁶

As a result of these competing policies, variations in unique industry needs, and the complex framework of intellectual property rights that cover types of ideas submitted, some variation in patent submission policies are to be expected.

In recent years, a divide of innovative labor has grown between large firms focusing on development and commercialization, and small firms focusing on generating new ideas and inventions.⁵⁷ With this growing divide, and the need for small firm inventors to have greater communication with large firm commercializers, one might expect a growth in legal options to further best practices for facilitation of invention communication. Unfortunately, the exact opposite has occurred.

As discussed earlier, communications regarding third-party patent submissions relate to the larger legal umbrella of “idea submission policies” because they fall in the same category as general unsolicited communications.⁵⁸ Standard legal advice to companies regarding third-party patent communications is almost completely related to methods of how to block such materials. The focus of risk stems from merging patent submissions into the broader classification of “ideas” that may (or may not) be a “property right” and may (or may not) be subject to a “confidential relationship.”⁵⁹ Despite a patent being a recognized

56. Phillips, *Ships and Castles, Ports and Plains*, *supra* note 53.

57. Ashish Arora, Sharon Belenzon & Andrea Pataconi, *Killing the Golden Goose? The Changing Nature of Corporate Research, 1820-2007* 1, 3, 5 (Nat'l Bureau of Econ. Research, Working Paper No. 20902, 2015), <http://www.nber.org/papers/w20902> (finding that “over the period 1980-2007 . . . [t]here is substantial evidence [of] many large firms [to] increasingly rely on external knowledge to fuel their growth”); TEECE, *supra* note 46, at 72 (explaining that large firms “will tend to produce incremental innovations to current technologies while small, *de novo* firms, not tied to established assets and routines, are more likely to embrace radical innovations”).

58. See generally corporate “idea submission policies” which include restrictions on patent submissions. *Terms of Use*, BOSTON SCIENTIFIC, <http://www.bostonscientific.com/en-US/terms-of-use.html> (last visited Apr. 21, 2017) (“BSC and its employees do not accept or consider unsolicited ideas, including ideas for new products or technologies, processes, materials, marketing plans, or new product names. Please do not send your unsolicited ideas or any original materials to BSC or anyone at BSC. If, despite this request, you still send BSC your ideas and materials, please understand that by submitting the information through this Site, you assign BSC, free of charge, all worldwide rights, title and interest in all copyrights and other intellectual property rights in the information or materials you submit. We will be entitled to use any information and materials you submit through this Site for any purpose whatsoever without restriction and without compensating you in any way, and by submitting any such information and materials, you represent to BSC that you have the right to do so.”); Apple and Samsung policies quoted *supra* Section I.A.

59. *Handling Unsolicited Idea Submissions*, 38 LAWYER’S BRIEF at 2, no. 21, Nov. 15, 2008, 2008 WL 4793315.

property right and a public (non-confidential) document, no distinction is generally drawn when it comes to third-party submission risk analysis. A Westlaw Editorial Staff publication concerning the broad subject of idea submissions for a general counsel readership notes: “It is the practice of many corporations to return unopened any unsolicited matter in order to avoid risk of lawsuit.”⁶⁰ While the advisory piece notes that companies can “respect any patents or copyrights . . . the individual may have,”⁶¹ the newsletter recommendations discuss the helpfulness of company submission policies being clear on websites and cites Apple’s policy as exemplary: “Apple . . . do[es] not accept or consider unsolicited ideas, including . . . new or improved products or technologies.”⁶² The reason for the broad “no submission” language recommendations are situations where controversies arise from submitters sending an idea, nothing coming of it, then “a little while later, the submitting party [finding] out that the receiving party had in fact done something relating to the subject.”⁶³ While the newsletter notes most of the disputes are resolved “in favor of the defendant,” the promotion of a broad blocking policy is based on when “one is often left [with] the lingering thought that the entire controversy—and its costs—could have been avoided if the proper policies, procedures, and forms had been in place.”⁶⁴ The entire focus of advice is on eliminating “potential legal exposure,” which is best accomplished with a broad policy of blocking unsolicited third-party communications.⁶⁵

Legal advice for companies remains focused on elimination of all risk through blocking unsolicited communications. The corporate counsel treatise, *Corporate Counsel Solutions: Intellectual Property Management, Strategies and Tactics* states: “Unsolicited ‘submitted ideas’ sent in by the general public can also produce unfounded claims to rights as co-inventors of a company’s inventions. One way in which this risk may be minimized is to use non-technical people to screen unsolicited mail for submitted ideas and dispose of them.”⁶⁶ While

60. *Id.* at 15.

61. *Id.* at 22.

62. *Id.* at 23 (quoting APPLE, *supra* note 21).

63. *Id.* at 24.

64. *Id.*

65. *Id.* at 1.

66. 1 CORPORATE COUNSEL SOLUTIONS: INTELLECTUAL PROPERTY § 1.03[a] at 3 (Rev. ed. 2015). See also, regarding idea submissions, Arthur R. Miller, *Common Law Protection for Products of the Mind: An “Idea” Whose Time Has Come*, 119 HARV. L. REV. 703, 713 (2006), stating that “[the fear] of legal liability might incline companies to reject all submissions without consideration.”

provisions are listed for considering third-party communications—a quarantine office within a company’s patent department or mandatory policy to require that submissions contain non-confidential disclosure agreements—these recommendations are secondary.⁶⁷ Indeed, a leading publication for small inventors cites large company communication policies and notes: “Many companies do not want to see anything from independent inventors. The ‘*Not Invented Here (N.I.H.) Syndrome*’ is very much alive and well in American Industry. It is an established management pathology” that anything invented outside the company is of lesser value.⁶⁸ Similarly, *Management Review* magazine advises:

Contrary to what many people believe, business fortunes are not built on ideas for new and improved products sent in by customers or other individuals outside the firm. The fantasy scenario goes something like this: Joe Handyman buys a new lawnmower, finds it won’t trim around shrubs satisfactorily, retires to his workshop, develops an attachment to solve the problem, send the idea to a mower manufacturer, and everyone lives happily for years as the superior mower gains share of market power and Joe cashes his monthly royalty checks. This scenario almost never happens, . . . and industry, to protect itself from the unreasonable enthusiasm of idea suggestors, has been well advised to adopt procedures that sharply reduce the survival of unsolicited ideas. Difficulties that can arise in handling outside product ideas began to appear with the adoption of the patent system. They resulted in landmark court decisions as early as 1900, and they prompted some companies to adopt suit-proof systems during the 20’s and 30’s.⁶⁹

A further legal fear regarding unsolicited patent submissions and company review of submissions is associated with enhanced damages awards in future patent infringement litigation. While independent invention is not a defense for patent infringement, the submission of a patent for review may constitute the basis for confirmed knowledge of the patent and statutory treble damages in a future patent infringement action between the patent-owner-submitter and the operating company.⁷⁰ Some have argued that this risk of increased damages inhibits many

67. 1 CORPORATE COUNSEL SOLUTIONS: INTELLECTUAL PROPERTY § 1.03[a] at 3 (Rev. ed. 2015).

68. RICHARD LEVY, *THE COMPLETE IDIOT’S GUIDE TO CASHING IN ON YOUR INVENTIONS* 107 (2d ed. 2010).

69. C. Merle Crawford, *Unsolicited Product Ideas—Handle with Care*, 64 *MGMT. REV.* 54, 54-55 (1975).

70. If a company is found to have knowingly infringed a patent, it may be liable for willful infringement, giving a court discretion to increase damages up to three times the amount. 35 U.S.C.A. § 284 (LEXIS through Pub. L. 114-327).

companies from implementing patent submission channels as well as independently running patent pre-clearance searches.⁷¹

Beyond the legal advice to companies regarding open patent submission policies, business management academics have further cautioned that open submission policies “are of potentially limitless quantity and highly variable quality, . . . quality and quantity of submitted ideas may create burdens . . . for managers, exacerbated by the role of intellectual property ownership and protection”⁷² Researchers have noted that when the BP Gulf of Mexico oil spill occurred, “BP received over 80,000 ideas from outsiders in less than a month. Although . . . there were many innovative ones, it was a time consuming and non-trivial problem for the BP-led team to sort through the useful ideas and separate them from the less useful.”⁷³ Given the potential for high costs associated with poor submission management, and the legal risks associated with mismanagement, researchers find that when “a firm’s capacity to filter incoming ideas is overstrained, instead of allowing for a drop in the quality of handling the [submission], a firm may decide to block all incoming traffic.”⁷⁴

A final point on advice to companies considering patent submission policies is that open innovation proponents do not currently see patents as part of the outside open innovation communication process. Instead, they see “understanding as to confidentiality” and “progressive or staged disclosure protocols” as the key to a workable open innovation system.⁷⁵

71. Jeremiah Chan & Matthew Fawcett, *Footsteps of the Patent Troll*, 10 INTELL. PROP. L. BULL. 1, 8 (discussing the 2005 Patent Reform Act and noting the PRA would adjust current law to not allow “mere knowledge of a patent . . . to establish the notice requirements for willfulness.” The article goes on to state that the PRA “eliminates much of the confusion and fear that has inhibited many companies from implementing a formal patent review process or pre-clearance patent search.” A change in the willfulness standard would help companies “increase[] awareness” and “steer clear of a potential patent infringement.”).

72. Oliver Alexy, Paola Criscuolo & Ammon Salter, *Managing Unsolicited Ideas for R&D*, 54 U.C. BERKELEY 116, 118 (2012).

73. *Id.* at 117.

74. *Id.* at 136.

75. John R. Harris, *Patent Issues in Open Innovation*, LANDSLIDE, July/August 2014 at 2-3, 5, 16, available at http://www.americanbar.org/publications/landslide/2013-14/july_august/patent_issues_open_innovation.html (“an OI approach that treats every new idea as nonconfidential creates barriers to openness and communication. . . . Despite the complications, it remains in the best interest of both inbound and outbound innovators to keep their respective contributions private and only partially revealed, until a definitive sharing agreement can be reached. The element of trust in the relationship remains highly important—but you never really know who you can trust. Proposing an NDA, even if rejected, at least puts the issue of secrecy and confidentiality on the table, and opens a dialog about the subject, which can benefit both parties to the collaboration.”); see also Peter M. von Dyck & Jeffrey Black, *Navigating the Intellectual Property Roadblocks to Open Innovation*, 2 (eZassi White Paper, June 6, 2012), <http://www.qmed.com/sites/default/files/e->

Where patents do play a role for open innovation oriented companies, however, is within recommendations for them to patent early and broadly to protect their property rights, then open collaboration to third parties for potential innovation.⁷⁶ This myopic view does not include opportunity for outside patent owners to submit their property rights as part of a recommended open innovation system.⁷⁷

D. *Social Impact on Inventors Regarding Patent Submission Communications*

While no research has been conducted regarding the social or personhood⁷⁸ implications of patent submission policies and corporate review (or denial) of patents submitted, the impact on third-party inventors themselves cannot be ignored. In the context of Lockean property theories, Orly Lobel notes the impact property and attribution rights have on creative minds and entrepreneurial spirit. She states: “[c]reativity without a property right, or at the very least attribution, has been compared to the very act of alienation of one’s self.”⁷⁹ Accordingly, consideration or even acknowledgment of an invention by an operating company is central to part of “creators who make creative work.”⁸⁰

Less philosophical, and more towards the tangible views of creators, notable inventor Richard Levy⁸¹ discusses the need for third

Zassi%20White%20Paper%20Final%2012.6.12_0.pdf (“As [open innovation] evolves and expands beyond the consumer-oriented markets to more patent-centric industries, such as the life science markets, IP security becomes the chief concern of the submitting and receiving parties. The submitter needs to protect their invention details or trade secrets, while the receiving party could be exposed to litigation risk if the submitted information is not properly controlled or confidentiality is not maintained.”).

76. Harris, *supra* note 75, at 15-16.

77. See generally Chesbrough, *supra* note 43; Andrew King & Karim R. Lakhani, *Using Open Innovation to Identify the Best Ideas*, 55 MIT SLOAN MGMT. REV. 41 (2013); Karim R. Lakhani, Hila Lifshitz-Assaf & Michael L. Tushman, *Open Innovation and Organizational Boundaries: Task Decomposition, Knowledge Distribution and the Locus of Innovation*, 19 HANDBOOK OF ECONOMIC ORGANIZATION 355 (2013). The general literature on OI policy recommendations do not discuss patent submission policies.

78. Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 958-59 (1982) (“This ‘personhood perspective’ corresponds to . . . the so-called personality theory of property. . . . [O]bjects [we] feel are almost part of [our]selves . . . are closely bound up with personhood because they are part of the way we constitute ourselves as continuing personal entities in the world.”)

79. ORLY LOBEL, TALENT WANTS TO BE FREE: WHY WE SHOULD LEARN TO LOVE LEAKS, RAIDS & FREE RIDING 169 (2013).

80. *Id.*

81. Richard C. Levy, KKM GLOBAL BRAND STRATEGIES, <http://www.kkmbrands.com/richard-c-levy> (last visited Apr. 21, 2017) (“Richard C. Levy is president of Richard C. Levy & Associates, a company specializing in collaborative invention and licensing.”).

parties to approach manufacturing companies “as if planning a first-time military operation.”⁸² He states that selling an invention is “to engage in warfare . . . a battle of wits and nerves to convince a stranger to open a door and invite you inside.”⁸³ Levy—as an independent inventor—reasons that firms may have other justifications for this situation, but the outside-inventor only perceives corporate “selfish self-interests.” He explains that “[i]f you have a 100-person R&D department spending millions of dollars a year and a lone inventor comes along with a better idea, it makes it harder to justify your department to your boss”⁸⁴

Given the Lockean risks of not alienating one’s self, and the perception of “warfare” with patent submissions by individual inventors, a conclusion may be drawn that just the act of being able to submit a patent, and having the patent considered, holds extremely high intrinsic value to third-party patent submitters. More research should certainly be conducted in this area, but perhaps this is one reason why individual inventors are more inclined to partner with litigation-focused patent trolls and fight to take a more adversarial position against operating firm policies.

E. Background Summary—Economic Analysis of Patent Submission Policies for Patent-Submitters and Firm-Recipients

The patent submission process begins with a third-party patent-submitter who owns an invention: a “conceiv[ed] . . . design for a new and non-obvious technological product or process”⁸⁵ and properly obtained intellectual property rights on that product or process (a patent). Under the primary law and economics analysis of the “prospect” incentives that the patent system offers for commercialization, Edmund Kitch states that the patentee property owner will have the incentive to manage the development of that technology best to “maximize its social value, just as a private landowner has the incentive to maximize the value of her land.”⁸⁶ The strong property rights granted to the inventor ensures that sufficient incentives continue throughout the

82. LEVY, *supra* note 68, at 107.

83. *Id.*

84. *Id.* at 106 (quoting Michael Odza of *Tech. Access Report* in *The Wall Street Journal*); see also Myhrvold, *supra* note 3, at 45 (“[P]roduct companies too often see inventors and other patent holders as adversaries, and vice versa.”).

85. Sichelman, *supra* note 3, at 365-66 (distinguishing between “invention” and “innovation” in the commercialization context).

86. Michael J. Burstein, *Exchanging Information Without Intellectual Property*, 91 TEX. L. REV. 227, 239 (2012) (citing Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 271-75 (1977)).

commercialization process.⁸⁷ Accordingly, by seeking to submit the patent, the inventor-patent-submitter implicitly determines that the greatest maximization of social value for the property is through a partial or full transaction of the property (license or sale of the patent) to a third-party commercializing firm, not commercializing themselves.⁸⁸ Since the patent is already public, the submitter does not require confidentiality in the submission and has adequately protected their property right to the greatest extent possible during the patent prosecution process. As Kitch notes, one of the primary benefits of a patent system is to avoid the additional transaction costs in contracting with non-patent intellectual property.⁸⁹

In comparison to the inventor-submitter side, looking at patent submission processes for firm-recipients draws a more complex picture. Broadly speaking, a firm must consider the benefits of a valuable transaction occurring for an outside patent against the reviewing-costs for *all* submissions likely to be received.⁹⁰ Considering the benefits, “there [are] a scarcity of tools to support the more complicated decision-making process for early-stage technology acquisition,” and the technology is distinct to each patent transaction—conditional on a unique patent.⁹¹ The costs, in comparison, are better known and can be separated into two categories: the legal risks of receiving non-patent property (e.g. trade secrets, abstract ideas subject to misappropriation, and implied contracts); and the internal resource costs of adequately considering *all* submissions. When considering these benefits and costs,

87. *Id.*; see also F. Scott Kieff, *Coordination, Property, and Intellectual Property: An Unconventional Approach to Anticompetitive Effects and Downstream Access*, 56 EMORY L.J. 327, 328 (2006) (Kieff further argues that proper property rule enforcement can lead to “coordination among entrepreneurs, inventors, and venture capitalists to facilitate commercialization among new ideas.”).

88. The likelihood that individual inventors or small firms are “ill-equipped” to undertake commercial applications of their inventions is supported by recent research on growing disparities between small and large innovative firms. See Arora, Belenzon & Patacconi, *supra* note 57, at 4.

89. Kitch, *supra* note 38, at 277-78 (discussing how patents facilitate technology transactions better than trade secrets and noting that “[t]he patent creates a defined set of legal rights known to both parties at the outset of negotiations . . . the owner can disclose such information protected by the scope of the legal monopoly. . . . This reduced transaction cost increases the efficiency with which inventions can be developed.”) (citing EDMUND W. KITCH & HARVEY S. PERLMAN, *LEGAL REGULATION OF THE COMPETITIVE PROCESS: CASES, MATERIALS AND NOTES ON UNFAIR BUSINESS PRACTICES, TRADEMARKS, COPYRIGHTS AND PATENTS* 601 (1972) (noting by way of example in comparison to general “idea submissions” that negotiations are more likely to be entered into for ideas that are patented with property rights under U.S. patent laws)).

90. See generally *Handling Unsolicited Idea Submissions*, 38 LAWYER’S BRIEF, no. 21, Nov. 15, 2008, 2008 WL 4793315.

91. Simon J. Ford, Letizia Mortara & David R. Probert, *Disentangling the Complexity of Early-Stage Technology Acquisitions*, 55 RESEARCH-TECH. MGMT 40, 40 (2012).

firms must also consider that transacting over the patented technology may occur through other indirect channels, including the patent owner working with a side door intermediary the firm already has a relationship with⁹² or internal firm research and development achieving the same technical result through other non-patented or not-yet-patented means.⁹³

Analysis of firm-recipient policies must also consider the costs associated with no patent submission policies. As discussed previously, there are social costs to inventors and the greater patent system,⁹⁴ but there are also future firm costs associated with: inadvertently infringing a third-party patent through future firm operations; loss of a potential growth market to a competitor who first-moving exclusively licenses the third-party patent; and fueling the growth of new marketplaces for patent purchases from patent intermediaries.⁹⁵

Finally, it should be noted that from a firm-recipient perspective, there are a number of unique factors that may result in disparities in costs and benefits between firms—one *size* of policy may very well not *fit* all. First, the number of third-party patents owned in a firm's technology area, and the number of similarly situated competitors, may dictate the numbers of patent submissions a firm would likely receive when adopting an open patent submission policy—fewer third-party

92. These intermediaries include venture capitalists, smaller third-party incubator companies, or suppliers and the variety of acquisition methods including future small “firm acquisition, technology licensing, R&D subcontracting, joint ventures, and various types of partnerships and consortia.” *Id.*

93. One perspective is that every dollar reviewing third-party patents is a dollar not spent on developing firm patents.

94. *See supra* Section I.D.

95. This last point assumes there are increased costs associated with purchasing at least some patents through intermediaries as opposed to direct patent purchases. The most “efficient” process to acquire patents remains in dispute, but some argue that direct purchases are “inefficient.” Lamoreaux & Sokoloff, *infra* note 158, at 59-60. (“I remain reasonably convinced that arm’s-length purchase of inventions is today expensive and inefficient for much of modern technology [however] it is interesting to note ‘outsourcing’ of R&D is generally believed to be increasing.”). Indeed, many patent intermediary options exist, but they all work as some cost over direct transactions. *See* Myhrvold, *supra* note 3, at 47 (the largest intermediary, Intellectual Ventures, promises to assist product manufacturers through “one-stop shopping for patents” and to “bring together outside inventors to meet company-specific needs” but makes much profit in those offerings); Nathan Vardi, *Trolling For Suckers*, FORBES (July 20, 2011, 6:00 PM), <http://www.forbes.com/forbes/2011/0808/features-nathan-myhrvold-intellectual-ventures-trolling-suckers.html> (In 2011, since the founding of Intellectual Venture and “in a written response to questions IV said the firm has generated more than \$2 billion in revenue, mostly by licensing its patents”); *see also* Joff Wild, *IV Revenues Hit \$2 Billion As Recent Deals Show Firm’s Links With Other Major Market Players*, IAM MAG. (Mar. 5, 2011), <http://www.iam-media.com/blog/detail.aspx?g=03a44df3-787b-405e-9d5e-69136e93a5b3> (stating that “Intellectual Ventures has generated \$2 billion in licensing revenues since it was founded in 2000” and “that during 2010 IV had \$700 million of licensing income”).

patents owned, or more competitors for patents to be submitted, would likely result in fewer submissions. Second, the complexity and difficulty of patent development for outsiders in a given industry may dictate the number of third-party patents likely to be submitted—if a firm operates in a high research cost environment, with great sophistication levels for inventors, fewer third-party patents would be likely.⁹⁶ Third, the likelihood of high-risk non-patent submissions being received with an open patent submission policy may be higher in a given field—some industries may be more likely to receive non-patented ideas subject to misappropriation claims and/or trade secret submissions. Fourth, certain firm business models may be more or less dependent on outside innovation; if more dependent on outside innovation, then more likely to rely on outside patents and less internal R&D. Fifth, different firm business models may adjust over time to rely on outside patents more or less given changing operations—if new business growth is planned in an area where the firm has little IP ownership, additional patent review and acquisition may be desired and promoted. Sixth, clarity in independent invention may be more or less risky in some industries—where longer and more experimentally logged data is required to reduce an invention to practice, there may be less risk with reviewing patents as compared to an industry where reduction to practice and patent filing can happen quickly, which could add risk in timing disputes with inventor-submitters.⁹⁷ In addition to this list, there are likely myriad other cost considerations unique to each industry and individual firm.

96. The rate at which companies review newly issued patents, and conduct patent pre-clearance searches, is different for certain technology areas. Stuart J.H. Graham et al., *High Technology Entrepreneurs and The Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L.J. 1255, 1321-22 (2009) (“We . . . inquired whether our respondents’ companies regularly check the patent literature to determine if someone else has a U.S. patent that covered what they were doing or were considering. . . . A substantial share of the respondents to this question reported regularly doing patent searches. Among D&B respondents who answered, slightly more than one-third reported conducting these searches. This likelihood was particularly high for biotechnology (nearly seven in ten) and medical device (over half) companies, while slightly less than one-quarter of software companies reported doing regular patent searches. Among the venture-backed sample, searching was substantially more common. Among all the respondents to this question, nearly six in ten venture-backed firms reported that they regularly searched the patent literature. Again, this propensity was particularly high among biotechnology (nearly nine in ten) and medical device (over nine in ten) firms. Nevertheless, nearly three in ten venture-backed software startups and over six in ten similarly funded IT hardware companies reported doing so. . . . We find that those startups that do patent searches tend to conduct them relatively early in the commercialization process. Among the D&B population of companies, 65% report usually doing searches prior to product or process design, and 70% report that these searches are usually done during design and development.”).

97. With the recent implementation of the AIA, and the requirements of first inventor-to-file for patent rights, this risk would likely be substantially reduced.

II. INTELLECTUAL PROPERTY SUBMISSION POLICIES IN MOVIE SCREENPLAY AND BOOK PUBLISHING INDUSTRIES

To better understand how patent submission policies compare to other intellectual property submission policies, this section will briefly review screenplay and book manuscript submission standards. These two specific industries are helpful in comparison to patented-technology industries given the differences and similarities in intellectual property rights: screenplays with unstructured intellectual property protection in ideas; and book manuscripts protected under federal copyright law with well-defined rights.⁹⁸

A. *The Movie Industry—Screenplay Submission Policies*

The 1956 California Supreme Court decision *Desny v. Wilder* continues to govern the law and post-*Desny* procedures concerning screenwriter submissions to production studios.⁹⁹ The case facts illustrate the screenplay submission risks for the Hollywood industry. Victor Desny conceived and drafted a “literary and dramatic composition” based upon the life of Floyd Collins, an American cave explorer.¹⁰⁰ Desny submitted the composition-screenplay to Paramount Pictures Corporation for the purposes of consideration in movie production.¹⁰¹ After considering Desny’s submission, but without compensation to Desny, Paramount went forward with movie filming based on Desny’s screenplay.¹⁰² Desny filed suit against Paramount and Paramount argued, amongst other things, that “once [an] idea is disclosed without the protection of a contract, the law says that anyone is free to use it. Therefore, subsequent use of the idea cannot constitute consideration so as to support a promise to pay for such use.”¹⁰³ Finding in favor of Desny under an implied contract action, the court set forth a five-part test to establish when an idea submitter could prevail. To establish a claim, the submitter must show: “(1) he created the idea; (2) he clearly disclosed the idea for sale; (3) the recipient . . . voluntarily accepted the disclosure knowing the condition before he knew the idea;

98. Despite the IP-focused industry similarities, one notable difference between screenplay movie-producing firms and book publishing firms, compared to patent-focused technology firms, is that many (or most) patent technology companies function on internally created IP, whereas screenplay and publishing industries must rely on external IP intake.

99. *Desny v. Wilder*, 46 Cal. 2d 715 (1956).

100. *Id.* at 726-27.

101. *Id.*

102. *Id.* at 727.

103. *Id.* at 729.

(4) the idea is valuable; and (5) the recipient then made unauthorized use of the idea.”¹⁰⁴

In current practice, over 50 years after the *Desny* decision, screenplay submission processes are administered by almost canonical standards based on the *Desny* case risks. Should a writer submit a manuscript directly to a movie production house, one of three things will occur: “(1) the studio will not read it and return it to the sender unopened; (2) the studio will not read it unless submitted by an agent or attorney; [or] (3) the studio will read it if and only if the submitter signs a submissions release form.”¹⁰⁵ Indeed, the current Paramount Pictures policy states: “Sorry, but we do not accept unsolicited script or story submissions. Submissions sent via postal or email will be destroyed without being read.”¹⁰⁶ Instead of direct submissions, screenwriters wishing to submit their work to producers

must seek representation with an agent or manager who can facilitate the submission. They cannot approach producers directly, as most now refuse to accept unsolicited submissions to reduce exposure to accusations of idea theft. Producers who elect not to return submission materials unopened will typically refuse to read materials unless the screenwriter agrees to sign a release or waiver, effectively eliminating any legal recourse for idea theft. Consequently, screenwriters now depend on agents and managers to provide access to producers.¹⁰⁷

104. Rebecca Girolamo, *25 Words of Less: How Hollywood’s Pitch Process Has Changed the law of Ideas Protection*, 22 S. CAL. INTERDISC. L.J. 463, 479 (2013); see also *Desny*, 46 Cal. 2d at 732.

105. Girolamo, *supra* note 104, at 504 (citing BROOKE A. WHARTON, *THE WRITER GOT SCREWED (BUT DIDN’T HAVE TO)* 25 (1997)); see also ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* 544 (6th ed. 2012) (“[M]any movie studios and television producers routinely return unsolicited scripts unopened.”).

106. *FAQs*, PARAMOUNT PICTURES, <http://www.paramount.com/inside-studio/community/faqs> (last visited Apr. 21, 2017); Girolamo, *supra* note 104, at 504.

107. Julie A. Byren, *When the Million-Dollar Pitch Doesn’t Pay a Dime: Why Idea Submission Claims Should Survive Copyright Preemption*, 48 BERKELEY TECH. L.J. 1037, 1046 (2013); see also K.J. Greene, *Idea Theft: Frivolous Copyright-Lite Claims, or Hollywood Business Model?*, 7 HASTINGS SCI. & TECH. L.J. 119, 132 (2015) (quoting MICHAEL C. DONALDSON, *CLEARANCE AND COPYRIGHT: EVERYTHING YOU NEED TO KNOW FOR FILM AND TELEVISION* 17 (3d ed. 2008)) (“The custom of the film industry evidences that studios require idea submitters to sign ‘submission agreements,’ which some have said ‘might better be called waiver-of-all rights-just-to-get-a-chance-to-pitch agreements.’”); see also Girolamo, *supra* note 104, at 495 (“[S]ince *Desny*, studios have generally used submissions releases and returned unsolicited submissions unopened.”); Richard Warren Rappaport, Kenneth Atchity & Emily Patricia Graham, *Inside Hollywood, the Reel Path to Success in the Motion Picture Industry*, 28 ENT. AND SPORTS LAW. 3, 3-4 (2010) (Before contacting an agent, the authors of *Inside Hollywood* suggest a writer find representation and create an entity to represent the interest of the writer and be the submitter of the

The difficulty for screenwriters, with almost complete dependence on agents to provide access to producers, is that finding effective representation through an independent agent is itself “a notoriously competitive process and nearly impossible without a strong [personal] referral network.”¹⁰⁸ An agent is a sales person similar to a real-estate agent licensed by the state to legally represent the writer’s interest.¹⁰⁹ The agent represents the writer to the manager and helps with the logistics of filming later on.¹¹⁰ Managers partner with the writer and help oversee everything through production.¹¹¹ To attract the attention of an agent, a writer must “convince people that it would benefit them to invest their time in [the writer] and [the writer’s] material.”¹¹² Even for those networked enough to have representation and be selected to make a pitch, at the early stages only one out of every thirty scripts makes it to the final stages of production.¹¹³

According to the Hollywood Film Institute,¹¹⁴ the top film literary agencies, which include 472 literary agents, are: William Morris Endeavor; Creative Artist Agency; United Talent Agency; International Creative Management Partners; The Gersh Agency; and Paradigm Talent Agency.¹¹⁵ The screenplay submission policies for these agencies are as follows:

script.).

108. Byren, *supra* note 107. Despite the drawbacks, one potential perk for screenwriters, as compared to other intellectual property producers, is that it is industry custom to pay them reasonable compensation for furnishing ideas during a pitch presentation. Perhaps this additional incentive is necessary to overcome the obstacles in even getting to the pitch stage.

109. SYD FIELD, *SELLING A SCREENPLAY: THE SCREENWRITER’S GUIDE TO HOLLYWOOD 20* (2005) (explaining that agents either work with you if your product is something they can sell or do not even return calls if they will have a difficult time selling it).

110. Rappaport, Atchity & Graham, *supra* note 107, at 5-6.

111. CHAD GERVICH, *HOW TO MANAGE YOUR AGENT 16* (2014) (explaining that that managers have a different role than agents and by law cannot procure work for their clients like agents).

112. Brian Koppelman, *Here’s How to Get an Agent for Your Screenplay*, *INDI WIRE* (July 22, 2014, 1:45 PM), <http://www.indiewire.com/2014/07/heres-how-to-get-an-agent-for-your-screenplay-23922/>.

113. Byren, *supra* note 107, at 1047.

114. Dov Simens is the founder of Hollywood Film Institute and responsible for “launch[ing] the careers of Quentin Tarantino, Chris Nolan, Spike Lee, Kevin Smith, Queen Latifah, [and] Guy Ritchie” among many others. Alex Ferrari, *Listen to Dov Simens Quentin Tarantino’s Only Film Teacher Before He Made Reservoir Dogs!*, *NO FILM SCHOOL*, <http://nofilmschool.com/boards/discussions/listen-dov-simens-quentin-tarantinos-only-film-teacher-he-made-reservoir-dogs> (last visited Apr. 21, 2017).

115. Dov S-S Simens, *Hollywood’s Top Literary Agencies & 472 AgentsFalse . . . Pick One*, *WEB FILM SCHOOL* (Apr. 22, 2015), <http://www.webfilmschool.com/hollywoods-top-literary-agencies-472-agents-pick-one/>.

Top Screenplay Agencies ¹¹⁶	Policy/ Status
1. William Morris Endeavor ¹¹⁷	No policy listed
2. Creative Artist Agency ¹¹⁸	No policy listed
3. United Talent Agency ¹¹⁹	No submissions accepted ¹²⁰
4. International Creative Management Partners ¹²¹	Agents accept “query letters” ¹²²
5. The Gersh Agency ¹²³	No submissions accepted ¹²⁴
6. Paradigm Talent Agency ¹²⁵	No submissions accepted ¹²⁶

116. *Id.*

117. WME represented Lee Eisenberg and Gene Stupnitsky, two writers involved in “The Office,” “Bad Teacher,” and “Year One.” *WMA and Endeavor’s Top Clients*, VARIETY, <http://variety.com/2009/film/news/wma-and-endeavor-s-top-clients-1118002902/> (last visited Apr. 21, 2017).

118. CAA has represented clients such as Tom Hanks, Michael Douglas, Sharon Stone, Steven Spielberg and Martin Scorsese. Claudia Eller, *Earning CAAs*, L.A. TIMES (Apr. 22, 1997), http://articles.latimes.com/1997-04-22/business/fi-51293_1_richard-lovett.

119. UTA was involved with the TV series “Continuum” and movies such as “Wonderland,” “Impulse,” and “Adventures in the Sin Bin.” *United Talent Agency (UTA)*, IMDB, <http://www.imdb.com/company/co0033208/> (last visited Apr. 21, 2017).

120. UTA states that they operate “exclusively by referral,” accepting no unsolicited materials of any kind. *About Us*, UNITED TALENT, <http://www.unitedtalent.com/> (last visited Apr. 21, 2017).

121. ICM is responsible for packaging shows like “Grey’s Anatomy,” “Modern Family,” “The Big Bang Theory,” “Breaking Bad,” and many more. *About Us*, ICM PARTNERS, <http://www.icmpartners.com/> (last visited Apr. 21, 2017).

122. ICM lists no formal policy for submissions, but one of its agents is listed on 1000 Literary Agents and the agent accepts query letters. *International Creative Management (ICM) – Tina Dubois Wexler*, LITERARY AGENTS <https://www.1000literaryagents.com/literary-agent.php?id=1070> (last visited Apr. 21, 2017).

123. Gersh Agency has represented “such writers as Ernest Lehman, Budd Schulberg, Julius J. Epstein and Abraham Polonsky” and other talents such as “David Niven, Fredric March, Mary Astor, Lee J. Cobb, Dorothy McGuire, James Mason, Eddie Albert, Lloyd Bridges, William Holden and Karl Malden.” Dennis McLellan, *Phil Gersh, 92; Agent With Old Hollywood Instincts*, *Art Patron*, L.A. TIMES (May 11, 2004), <http://articles.latimes.com/2004/may/11/local/me-gersh11>.

124. The Gersh Agency states on its website that it does not accept any unsolicited material. *Unsolicited Submission Policy*, GERSH, <http://www.gershagency.com/unsolicited-submission-policy.html> (last visited Apr. 21, 2017).

125. Through its agent Sam Gore, Paradigm Talent Agency has represented actors such as Laurence Fishburne, Philip Seymour Hoffman and Felicity Huffman and packaged television shows like “Desperate Housewives,” “24,” and “Rescue Me.” Clair Hoffman, *Quietly Building a Talent Force*, L.A. TIMES (Aug. 21, 2006), <http://articles.latimes.com/2006/aug/21/business/fi-paradigm21>.

126. Paradigm Talent Agency does not accept any unsolicited material. *Unsolicited*

For the top Hollywood agencies, essentially all unsolicited screenplay submissions are blocked. Current scholars note that despite Victor Desny's win over 50 years ago, "contract law is more foe than friend to new entrants with ideas for film or television."¹²⁷ Scholars conclude that strict submission policies result in writers having less opportunity to present their ideas, "which could ultimately slow the progress of the literary arts."¹²⁸ Further, there is "strong evidence" that many screenplay ideas were created by, and stolen from, minority writers.¹²⁹ To prevent this theft and underproduction of screenplays, scholars now argue that screenplay submissions, "like the rest of IP, should look to the bottom of the production chain, where most creativity exists, rather than mechanically protecting the interests of noncreative and hierarchical distributors such as major studios and networks."¹³⁰

B. *The Publishing Industry—Book Manuscript Submission Policies*

Similar to screenplay submissions, "the vast majority of editors acquire books in a rather systematic manner drawing on well-established procedures and contracts."¹³¹ Far different than screenplay submissions, however, is that book publishers still accept manuscripts "over the transom," a publishing term defined as "sen[ding] unsolicited [manuscripts] to a publishing firm with a 'To Whom It May Concern' letter."¹³² While authors' agents are still plentiful and act as gatekeepers or curators of authors they represent,¹³³ many publishers deal directly with authors on their own or upon "direct referral" recommendations, where an established author writes a "strong, personal letter to an editor or publisher recommending that the house consider [an] enclosed

Submissions Policy, PARADIGM TALENT AGENCY, http://production.paradigmagency.com/unsolicited_submissions_policy (last visited Apr. 21, 2017).

127. Greene, *supra* note 107, at 132.

128. Girolamo, *supra* note 104, at 495 (citing BROOKE A. WHARTON, *THE WRITER GOT SCREWED (BUT DIDN'T HAVE TO)* 25 (1997)).

129. Greene, *supra* note 107, at 142 ("[T]here is strong evidence that some of the most popular television shows about African Americans, including 'The Jeffersons' and 'Good Times', as well as the ground-breaking 'Cosby Show' were created by—and stolen from—African American idea men.").

130. *Id.*

131. ALBERT N. GRECO, JIM MILLIOT & ROBERT M. WHARTON, *THE BOOK PUBLISHING INDUSTRY* 184 (3d ed. 2014).

132. *Id.*

133. GILES CLARK & ANGUS PHILLIPS, *INSIDE BOOK PUBLISHING* 21 (5th ed. 2014); *see also* GRECO, MILLIOT & WHARTON, *supra* note 131, at 186 (3d ed. 2014).

manuscript or book outline.”¹³⁴

According to Rüdiger Wischenbart, a publishing consulting company which “map[s] and analy[zes] the global publishing industry,”¹³⁵ the top five publishing groups in 2015 were: Pearson; ThomsonReuters; Relx Group; Wolters Kluwer; and Penguin Random House.¹³⁶ Their manuscript submission policies are as follows:

134. *Id.* at 185.

135. *About Content and Consulting!*, RÜDIGER WISCHENBART, <http://www.wischenbart.com/page-51> (last visited Apr. 21, 2017).

136. *The Global Ranking of the Publishing Industry 2015*, RÜDIGER WISCHENBART 4 (2015), http://www.wischenbart.com/upload/Wischenbart_Ranking2015_analysis_final.pdf; *see also The World's 57 Largest Book Publishers, 2015*, PUBLISHERS WEEKLY, <http://www.publishersweekly.com/pw/by-topic/international/international-book-news/article/67224-the-world-s-57-largest-book-publishers-2015.html> (last visited Apr. 21, 2017).

Top Publishing Companies ¹³⁷	Policy/ Status
1. Pearson	No policy listed ¹³⁸
2. ThomsonReuters	Submissions accepted ¹³⁹
3. Relx Group TM	No submissions accepted ¹⁴⁰
4. Wolters Kluwer	Submissions accepted ¹⁴¹
5. Penguin Random House	No submissions accepted ¹⁴²

137. RÜDIGER WISCHENBART, *supra* note 136; *see also* PUBLISHERS WEEKLY, *supra* note 136.

138. No submission policy for Pearson was found, although Pearson subsidiaries do have various open submission policies (*see infra*). *Focused on Delivery: Pearson Annual Report and Accounts 2015*, PEARSON (Mar. 4, 2016), https://www.pearson.com/content/dam/corporate/global/pearson-dot-com/files/annual-reports/ar2015/Pearson_AR2015.pdf; *see infra* text accompanying notes 142-144.

139. The ThomsonReuters website lists numerous open to submissions with certain portals available for submitting content. *See Scholarly Publishing and Presenting*, THOMSONREUTERS, <http://thomsonreuters.com/en/products-services/scholarly-scientific-research/scholarly-publishing-and-presenting.html> (last visited Apr. 21, 2017). Manuscripts can be submitted to ScholarOne Manuscripts and is ThomsonReuters' "leading system for web-based manuscript submission, peer review, and tracking." *ScholarOne Manuscripts TM*, THOMSONREUTERS, http://thomsonreuters.com/content/dam/openweb/documents/pdf/scholarly-scientific-research/fact-sheet/manuscripts_fs.pdf (last visited Apr. 21, 2017); *see also Intellectual Property & Science*, THOMSONREUTERS, <http://ip-science.thomsonreuters.com/info/journalsubmission-front/> (last visited Apr. 21, 2017) (form for submitting articles in the intellectual property & science field).

140. RELX Group TM does not state whether they accept unsolicited manuscripts, however, in their terms and conditions they have the following policy blocking submissions: This policy grants RELX Group TM a "non-exclusive, sublicenseable right and license to use, reproduce, modify, adapt, publish, translate, create derivative works from, distribute, perform, play, and exercise all copyright and publicity rights with respect to any such work." *Terms and Conditions*, RELX GROUP, <http://www.relx.com/Pages/Termsandconditions.aspx> (last visited Apr. 21, 2017). Elsevier B.V., a subsidiary of RELX Group TM, accepts book proposals relating to Science and Technology. *Submitting your book proposal to Elsevier, How to Write and Submit a Book Proposal, Science and Technology Book Publishing*, ELSEVIER, <https://www.elsevier.com/authors/book-authors/science-and-technology-book-publishing/how-to-write-and-submit-a-book-proposal#Submit> (last visited Apr. 21, 2017).

141. Wolters Kluwer always accepts book proposals through their website. *Authors*, WOLTERS KLUWER BLOGS, <http://authors.wolterskluwerblogs.com/> (last visited Apr. 21, 2017); *see also Contact Form*, WOLTERS KLUWER BLOGS, <http://authors.wolterskluwerblogs.com/contact-form/> (last visited Apr. 21, 2017).

142. Penguin Random House does not accept any unsolicited materials. *Manuscript Submissions*, PENGUIN RANDOM HOUSE, <http://www.penguinrandomhouse.biz/manuscripts/> (last visited Apr. 21, 2017). Penguin Group (USA) Inc., however, is a subsidiary of Penguin Random House, which is also a subsidiary of Pearson. Penguin Group (USA) Inc. accepts all submissions. PEARSON, *supra* note 138; *see infra* text accompanying note 143. Penguin Group (USA) Inc. does not accept all submissions. Penguin Random House Company, *Frequently Asked Questions*,

Through further research into each of the publishing companies, it was found that most large “parent” publishers also have numerous subsidiary companies—generally for publications on specific subjects (e.g. science fiction books)¹⁴³—which *do* have open policies. For the three large publishing groups listed that do not have clear “submissions accepted” policies, subsidiary companies include:

Subsidiary Publishing Companies	Policy/ Status
1. Pearson Education (Pearson)	Submissions accepted ¹⁴⁴
2. InformIT (Pearson)	Submissions accepted ¹⁴⁵
3. Elsevier B.V. (Relx Group TM)	Submissions accepted ¹⁴⁶
4. Penguin Group (USA) Inc. (Penguin/Pearson)	Submissions accepted ¹⁴⁷

Accordingly, based on industry data and independent research conducted for this Article, it can generally be said that book publishers *will* receive and review unsolicited submissions from independent authors. While authors are recommended to work with an agent in increasing the effectiveness of their submission,¹⁴⁸ publishers are still advised to create clear channels to accelerate the time to review works.¹⁴⁹ In no way is there an industry standard to block unsolicited

PENGUIN GROUP USA, <http://www.penguin.com/aboutus/faq/#manuscripts> (last visited Apr. 21, 2017).

143. DAW: *Submission Guidelines*, PENGUIN RANDOM HOUSE, <http://www.penguin.com/publishers/daw/> (last visited Apr. 21, 2017) (“DAW Books [a subsidiary of Penguin Random House Company] was the first publishing company ever devoted exclusively to science fiction and fantasy. Now more than 30 years and more than a thousand titles later, DAW has a well-deserved reputation for discovering and publishing the hottest talents in the industry. . . . DAW accepts unsolicited submissions of science fiction and fantasy novels.”).

144. Pearson Education accepts all submissions. *Information for Authors*, PEARSON, <https://uk.pearson.com/information-for-authors.html> (last visited Apr. 21, 2017).

145. InformIT accepts all submissions. *Write for Us*, INFORMIT, http://www.informit.com/about/write_for_us.aspx (last visited Apr. 21, 2017).

146. Elsevier B.V. accepts book proposals relating to Science and Technology. ELSEVIER, *supra* note 140.

147. PENGUIN GROUP USA, *supra* note 142.

148. CLARK & PHILLIPS, *supra* note 133, at 22 (“Agents and publishers sort the wheat from the chaff.”).

149. *See id.* at 21; *see also* GRECO, MILLIOT & WHARTON, *supra* note 131, at 186.

submissions as with Hollywood screenplays.¹⁵⁰

III. HISTORICAL EXAMPLES OF PATENT SUBMISSIONS

In addition to comparing current patent submission policies to current IP submission policies in the movie screenplay and book publishing industries, review and comparison of nineteenth century patent submission policies may provide historical insights into current firm practices. Various legal scholars and economists have documented the general growth of patent markets in the nineteenth century as well as individual invention success stories propelled primarily by patents. In a seminal book on historical patent markets, *The Democratization of Invention: Patents and Copyrights in American Economic Development, 1790-1920*, economist Zorina Khan traces the history of “[e]xtensive markets in patent rights allow[ing] [United States] inventors to extract returns from their activities through licensing and assigning or selling their rights.”¹⁵¹ Khan’s historical research finds that the specialization of inventors to invent, then extract return on their activities through licensing or selling their rights to commercializing firms, was a core driving force propelling the United States to the forefront of all other industrial nations during the nineteenth century.¹⁵² A crucial requirement of this invention specialization was “[a]ccess to markets and trade in inventions . . . [and e]xtensive markets in patent rights.”¹⁵³

Regarding individual inventors and inventions, Adam Mossoff’s work has focused on some of the best-known United States inventors’ practices of licensing or selling their patents rather than commercializing themselves. Inventors include Thomas Edison, Charles Goodyear, and Elias Howe, Jr.¹⁵⁴ Mossoff describes how the “secondary market” of buying and selling patents included inventors regularly posting advertisements for the sale of patents in mid-nineteenth century periodicals.¹⁵⁵ These advertisements, often published in such magazines

150. See CLARK & PHILLIPS, *supra* note 133, at 21; see also GRECO, MILLIOT & WHARTON, *supra* note 131, at 186.

151. ZORINA B. KHAN, *THE DEMOCRATIZATION OF INVENTION: PATENTS AND COPYRIGHTS IN AMERICAN ECONOMIC DEVELOPMENT, 1790-1920* 10 (Claudia Goldin ed., 2005).

152. *Id.* at 9.

153. *Id.* at 10.

154. Adam Mossoff, *Patent Licensing and Secondary Markets in the Nineteenth Century*, 22 GEO. MASON L. REV. 959, 962-66 (2015) [hereinafter *Patent Licensing*]; Adam Mossoff, *Patents as Commercial Assets in Political, Legal and Social Context*, 51 TULSA L. REV. 455, 457, 460 (2016); see Adam Mossoff, *The Rise and Fall of the First American Patent Thicket: The Sewing Machine Wars of the 1850’s*, 53 ARIZ. L. REV. 165 (2011).

155. *Patent Licensing*, *supra* note 154, at 967 (“The classified ads in *Scientific American*

as *Scientific American*,¹⁵⁶ would request agents to help with the selling of patent rights or offer to sell patents outright to firms able to commercialize.¹⁵⁷

Regarding company patent submission policies specifically, economists Naomi Lamoreaux and Kenneth Sokoloff have extensively documented historical patent purchase practices in various research projects.¹⁵⁸ During the 1890 to 1910 time period, described as the “golden era of the independent inventor,”¹⁵⁹ data shows an “extensive trade in new technological ideas . . . supported by the patent system and the emergence of information channels and intermediaries that facilitated the sale of patents at arm’s length.”¹⁶⁰ The expansion of trade made possible a new division of labor whereby firms relied on outside invention and “develop[ed] capabilities that enabled them to learn about and assess externally generated inventions.”¹⁶¹ During this time period, research into company records reveals “numerous reports evaluating the novelty and importance of inventions offered by the public for sale. . . . [C]ompan[ies] [were] determined not to overlook any possible source of technological advantage that might be obtained by purchasing the patents of independent inventors, even though . . . most of the inventions . . . reviewed [were] not worth pursuing.”¹⁶²

provide a window into this vibrant and widespread secondary market.”).

156. *Scientific American* emerged after the 1836 Patent Act, “whose main business was to assist inventors in filing applications for patents.” Through this goal though, they often advertised inventors and their patents, attracting many buyers and “facilitated the work of intermediaries by disseminating information about meritorious patents to a broad audience.” Naomi R. Lamoreaux, Kenneth L. Sokoloff & Dhanoos Sutthiphisal, *Patent Alchemy: The Market for Technology in US History*, 87 *BUS. HIST. REV.* 3, 12-14 (2013) (explaining that Munn & Company, the owners of *Scientific American*, was responsible for “fil[ing] approximately 15 percent of all the patent assignments in the United States in the years immediately following the Civil War.”).

157. *Patent Licensing*, *supra* note 154, at 967-68 (citing *Advertisements*, 21 *SCI. AM.* 143, 143 (1869) (explaining an ad which stated “AGENTS WANTED - - To sell H.V. Van Etten’s Patent Device for Catching and Holding Domestic Animals”).

158. Lamoreaux, Sokoloff & Sutthiphisal, *supra* note 156, at 5 (“[S]howing that . . . in each period interested parties developed solutions that enabled them to profit by improving the workings of the market.”); Naomi R. Lamoreaux & Kenneth L. Sokoloff, *Inventors, Firms, and the Market for Technology in the Late Nineteenth and Early Twentieth Centuries*, in *LEARNING BY DOING IN MARKETS, FIRMS, AND COUNTRIES* 20 (Naomi R. Lamoreaux, Daniel M. G. Raff & Peter Temin ed., 1999) (discussing the “information and contracting problems that firms . . . faced at the time they began to build their [internal research and development] capabilities”).

159. THOMAS P. HUGHES, *AMERICAN GENESIS: A CENTURY OF INVENTION AND TECHNOLOGICAL ENTHUSIASM* 15 (1989) (explaining that around 1876 a golden era of independent inventors began with the invention of the telephone by Alexander Graham Bell and Menlo Park’s opening by Thomas Edison, and ended with around the time World War 1 started).

160. Lamoreaux & Sokoloff, *supra* note 158, at 20.

161. *Id.* at 49.

162. *Id.* at 41.

A number of “high-tech” enterprises of the period offer illustrative examples of this late nineteenth century open patent submission policy standard.¹⁶³ In its early years, American Bell Telephone Company attached much greater importance to assessing inventions that originated externally than it did to promoting inventive activity within the firm.¹⁶⁴ The long-time chief of Bell’s patent department, T.D. Lockwood, “placed emphasis first and foremost on examining ‘patents or inventions submitted by the public for consideration’ and second on examining ‘descriptions of inventions forwarded by the company’s employees.’”¹⁶⁵ “Lockwood was mainly concerned with building American Bell’s capacity to learn about and assess the merits of inventions generated elsewhere in the economy.”¹⁶⁶ In the electrical/power industry, Westinghouse and Edison/General Electric “followed a similar strategy in the late nineteenth century of ‘purchasing patents and short term consulting services from independent inventors.’”¹⁶⁷ In the mechanical machinery industry, Channing Whittaker built up the patent department at the Lowell Machine Shop in similar fashion, arguing “that it was essential to keep track of patents issued to outside inventors so that the company did not waste resources reinventing what had already been developed.”¹⁶⁸ Whittaker emphasized that “the purchase of outside patents should be considered ‘not a net expense but a net saving’ because it enabled managers to solve technical problems more cheaply than they could if they relied exclusively on internal resources.”¹⁶⁹ Finally, in the early 1900s petroleum industry, Standard Oil restructured its patent department to focus on “keeping abreast of outside inventions” by internalizing the services of its patent solicitors.¹⁷⁰

The historical research makes clear that in the late nineteenth

163. *Id.* (noting that in 1984 American Bell Telephone Company “investigated seventy-three patents submitted ‘by the public’ and twelve brought to its attention by employees”).

164. *Id.* at 41-42.

165. *Id.* at 42 (citing T. D. Lockwood, “Duties of Patent Department,” 23 November 1885, AT&T Collection, box 1302, AT&T Corporate Archives).

166. *Id.*; *see also* Lamoreaux, Sokoloff & Sutthiphisal, *supra* note 156, at 15 (AT&T’s records indicate that a wide variety of patents were submitted, from textiles to general engineering consultants.).

167. Lamoreaux & Sokoloff, *supra* note 158, at 43 (citing GEORGE WISE, WILLIS R. WHITNEY, GENERAL ELECTRIC, AND THE ORIGINS OF U.S. INDUSTRIAL RESEARCH (1985)).

168. *Id.*

169. *Id.* at n.30 (“How the Patent Library Came into Existence,” box 1, file 8; ‘The Value of a Patent Department to a Manufacturing Concern,’ box 2, file 17; both in Channing Whittaker Papers, Lambert Collection, Center for Lowell History.”).

170. *Id.* at 44 (but also noting that there were “a small number of large firms” that focused on building “in-house R&D facilities” as opposed to seeking primarily outside inventions; Du Pont is a noted example).

century, likely every large American high-tech company accepted direct patent submissions from independent inventors, actually making outside invention the *primary* source of innovation-input. The literature does, however, document a shift towards internally generated technologies in a period after the First World War for various reasons. These reasons include “the rising cost of the human and physical capital required for invention (which made it difficult for inventors to continue to operate independently) and the emergence of large firms with significant market power (which made patents an increasingly important factor in oligopolistic competition).”¹⁷¹ During that shift, however, while company patent department directions may have changed, external patent submissions were not specifically blocked. It is unclear when some internal company policies shifted so significantly—from firms focused primarily on independent outside patent input, to focusing on internal R&D development, to some current firm practices of completely blocking external patent submissions.¹⁷²

IV. DESCRIPTIVE SURVEY OF CURRENT PATENT SUBMISSION POLICIES

To standardize the data collection of patent submission policies, four diverse industries were selected for review: automotive; computer hardware; computer services; and pharmaceutical. These four industries were selected for a variety of reasons including that the industries are technology-intensive with many patents covering products, they are generally separated from each other for a reduction in overlapping markets and customers, and third-party patent data would be more likely to separate along these industry boundaries for further analysis.¹⁷³ Finally, the goal of the open patent submission/no patent submission policy review was to determine if there is a global industry standard that could be drawn for the largest industry firms as opposed to nuanced language differences in patent submission policies. Indeed, after reviewing the data, it was found that no two policies were exactly the same.

A. *Patent Submission Policies for Representative Companies in Each Industry*

To generalize standards for each industry, it was determined that a

171. *Id.* at 21.

172. *See infra* Section IV.

173. *E.g.*, USPTO classifications.

representative company sample should be gathered to represent each—to capture the majority of leading industry firms and then seek patent submission policy data on each to extract a general standard for the largest industry firms. While this posed some data risks (e.g. bias towards large company policies) because the goal was only to draw a general policy standard for each industry, then compare industry standards, biases would likely be common and equal across all industries.

Within the four industry classifications, there were a variety of options for selecting company “rank” and a number of ranking lists were considered when researching industry-leading companies. For consistency, and to include enough data points for industry comparisons, a list of at least the top ten companies per industry was sought. Ranking lists considered include Fortune 500, Fortune Global 500, and Bloomberg Market Leaders.¹⁷⁴ Unfortunately, while those lists include many companies, the industry categorizations do not consistently include a top ten list or even ten companies.¹⁷⁵

Through expanded research, the 2015 Forbes Global 2000 list was considered. That list includes at least ten companies per industry based on the largest public international companies measured on sales, profits, assets, and market value.¹⁷⁶ In creating the 2015 Global Forbes List, Forbes collected verified third-party data using FactSet Research Systems, Bloomberg, and company financial documents for over 3,400

174. *Fortune 500 2014*, FORTUNE, <http://fortune.com/fortune500/> (last visited July 20, 2015); *Global 500 2014*, FORTUNE, <http://fortune.com/global500/> (last visited July 19, 2015); *Bloomberg Industry Market Leaders: Visual Data*, BLOOMBERG, <http://www.bloomberg.com/visual-data/industries/> (last visited July 19, 2015).

175. *Global 500 2014*, FORTUNE, *supra* note 174 (follow “Filter by” hyperlink, then follow “Internet Services and Retail” hyperlink from “Industry” list) (The “Internet Services and Retailing” industry category contains only two companies: Amazon and Google.) (last visited July 19, 2015); BLOOMBERG, *supra* note 174 (last visited July 19, 2015) (The “internet media” industry category, including Google, Tencent Holdings, Facebook, Baidu, and Yahoo, lists only nine companies.).

176. Andrea Murphy, *2015 Global 2000: Methodology*, FORBES (May 6, 2015, 9:37AM), <https://www.forbes.com/sites/andreamurphy/2015/05/06/2015-global-2000-methodology/#c5e407f70f9b> (“We first create four separate lists of the 2000 biggest companies in each of the metrics: sales 2000, profits 2000, assets 2000, and market value 2000. . . . A company needs to qualify for at least one of the lists in order to be eligible for the final Global 2000 ranking. This year 3,400 companies were needed to fill out the four lists of 2000, each company qualifying for at least one of the lists. Each company receives a separate score for each metric based on where in ranks on the metric’s 2000 list. If a company ranks below any metric’s 2000 list cutoff . . . it receives a zero score for that metric. We add up all the scores for all four metrics (equally weighted) and compile a composite score for each company based on their rankings for sales, profits, assets and market value. We sort the companies in descending order by the highest composite score and then apply our Forbes Global 2000 rank. The highest composite score gets the highest rank.”).

total companies.¹⁷⁷ Forbes based sales, profits, and assets on data over the previous 12 month period, and market value was calculated as of April 6, 2015.¹⁷⁸ Accordingly, the top ten companies for each industry in this article are based on the most recent Forbes Global 2000 lists.¹⁷⁹

The top ten companies for each industry are presented in descending order by market value,¹⁸⁰ calculated as of April 6, 2015:¹⁸¹

Auto & Truck Manufacturers¹⁸²—Toyota, Volkswagen Group, Daimler, BMW Group, Ford Motor, Honda Motor, General Motors, SAIC Group, Nissan Motor, Hyundai;

Computer Hardware companies¹⁸³—Apple, Hewlett-Packard, Lenovo, Fujitsu, Quanta, Asustek, InnoLux Corp., Compal Electronics, Inventec, Wistron;

Computer services¹⁸⁴—Google, Facebook, Tencent Holdings, IBM, Tata Consultancy Services, Baidu, Accenture, Yahoo, Infosys, Cognizant Technology;

Pharmaceuticals¹⁸⁵—Novartis, Roche Holding, Pfizer, Merck & Co., Novo Nordisk, Sanofi, Actavis, Glaxo Smith Kline, Bristol-Meyers Squibb, AbbVie.

The next step in the analysis was to determine how to classify company patent submission policies. Since individual company patent submission policies are different in language and focus, determining an objective standard was required. Numerical rankings of company openness to patents was considered (e.g. a value of 0 for no inventions and 10 for payment for valuable inventions offered, with middle values

177. *Id.*

178. *Id.*

179. *The World's Biggest Public Companies: 2015 Global 2000*, FORBES, <http://www.forbes.com/global2000/list/> (last visited July 2, 2015).

180. While the 2015 Forbes Global 2000 list can be ranked on sales, profits, assets, and market value, the ranking for this analysis was based on a top ten market value rank. This was determined to be the best rank for the purposes of finding top ten market leaders in furtherance of understanding standard policies for each industry. Murphy, *supra* note 176. “Market Value” is defined as “[w]hat investors believe a firm is worth; calculated by multiplying the number of shares outstanding by the current market price of a firm’s [stock].” *Market Value*, NASDAQ, <http://www.nasdaq.com/investing/glossary/m/market-value> (last visited Apr. 21, 2017).

181. Murphy, *supra* note 176.

182. FORBES, *supra* note 179.

183. *Id.*

184. *Id.* (follow “Computer Services” hyperlink from “All Industries” menu; then select “Market Value” hyperlink).

185. *Id.* (follow “Pharmaceuticals” hyperlink from “All Industries” menu; then select “Market Value” hyperlink).

based on unique policy traits), but that proved to generally result in only high and low rankings (e.g. only 0's or 10's). In the end, a binary system was established based on three variables—two policy options plus a no policy option:

Option #1: **open patent submission policies**—allowing patent submissions. A company must (1) provide a means for submitting invention ideas or patents, (2) not state that all invention ideas or patents will be refused, and (3) not state that a free license, without any compensation for IP rights, will result from a patent or invention idea submission.

Option #2: **no patent submission policies**—blocking all patent submissions. If the company policy failed any of the three testing points for open patent submission policies it was deemed a no patent submission policy. By way of common example, a typical no patent submission policy states that a company does not want to receive invention ideas, but if invention ideas are submitted, they become the company's property to do with as they see fit.¹⁸⁶

Option #3: **no policy**—no stated policy regarding patent submissions, either publicly listed or after inquiring directly with the company.

With the company top ten lists and category standards, searches were conducted to locate policies on company websites as well as general internet searches to find subsidiary companies designed to specifically handle third-party patent submissions. Examples of subsidiary companies include Qualcomm Innovation Center, Inc. and Sharp & Dohme Corp. (a subsidiary of Merck & Co., Inc.), which are separate entities for handling third-party IP and collaboration. The company policies and subsidiary companies were collected to make a determination as to open patent submission or no patent submission, as well as comparison with historical 2010 policies when available.¹⁸⁷

186. This sample language was based on Apple's no patent submission policy. APPLE, *supra* note 21 ("If, despite our request that you not send us your ideas, you still submit them, then regardless of what your letter says, . . . your submissions and their contents will automatically become the property of Apple, without any compensation to you . . .").

187. When researching patent submission policies, a 2010 blog post was discovered containing historical policy data for comparison. Gene Quinn, *Companies Don't Accept Confidential Submission of Ideas or Inventions*, IPWATCHDOG (Feb. 10, 2010), <http://www.ipwatchdog.com/2010/02/18/companies-dont-accept-confidential-submissions/id=9125/> (IPWatchdog is a popular source for intellectual property news and current information, specifically related to patents and innovation. A blog post was made in response to an affidavit in support of a preliminary injunction motion. The blog subject was about confidentiality agreements being more effective than patents. The post goes on to quote numerous company confidentiality policies and third-party idea submissions. The blog author was contacted to obtain the original screenshots of the

Approximately half of the companies analyzed do not have policies available online. For those companies, various different collection methods were used to locate an email contact within the company's legal department.¹⁸⁸ If after two attempts at contacting the company no reply was received, "no policy" was assumed (no policy—no stated policy found regarding patent submissions). One important early observation on the no policy firms is that a large majority of the companies missing policies are non-U.S. corporations (especially in the computer hardware industry). This may be indicative of a trend in foreign companies to not have patent submission policies or procedures.¹⁸⁹

The policies found for the four industries studied are as follows:¹⁹⁰

Auto & Truck Manufacturers ¹⁹¹	Policy/Status
1. Toyota Motor	No patent submission
2. Volkswagen Group	No policy
3. Daimler	Open patent submission
4. BMW Group	Open patent submission
5. Ford Motor	Open patent submission
6. Honda Motor	Open patent submission
7. General Motors	Open patent submission
8. SAIC Motor	No policy
9. Nissan Motor	No policy
10. Hyundai Motor	No patent submission

2010 company policies for comparison with policies collected summer of 2015. Many thanks to Gene Quinn for providing the data). Three 2015 company policies were compared with the 2010 historical data: Ford, GM, and Apple. There was no substantive change to any of the three policies between the five-year period.

188. Attempts were made to contact each company's general counsel, legal department, or any other department (if legal contacts were unavailable) to determine their policy for handling third-party idea submissions.

189. *See infra* Part V.

190. An electronic database of all policies and when/how they were accessed is on file with the author.

191. FORBES, *supra* note 179 (follow "Auto & Truck Manufacturers" hyperlink from "All Industries" menu; then select "Market Value" hyperlink).

Computer Hardware ¹⁹²	Policy/Status
1. Apple	No patent submission
2. Hewlett-Packard	No patent submission
3. Lenovo Group	Open patent submission
4. Fujitsu	No policy
5. Quanta Computer	No policy
6. Asustek Computer	No policy
7. InnoLux Corp.	No policy
8. Compal Electronics	No policy
9. Inventec	No policy
10. Wistron	Open patent submission

192. *Id.* (follow “Computer Hardware” hyperlink from “All Industries” then “Market Value”).

Computer Services ¹⁹³	Policy/Status
1. Google	Open patent submission ¹⁹⁴
2. Facebook	No policy
3. Tencent Holdings	No policy
4. IBM	No patent submission
5. Tata Consultancy Services	No policy
6. Baidu	No policy
7. Accenture	No patent submission
8. Yahoo	No patent submission
9. Infosys	NA ¹⁹⁵

193. *Id.* (follow “Computer Services” hyperlink from “All Industries” menu; then select “Market Value” hyperlink).

194. It was determined that Google be categorized as an open patent submission policy based on its recent “Google Patent Opportunity Submission.” In addition to this program, Google recently started participating in a “Patent Starter Program,” two-week long “Patent Purchase Promotion,” and other patent sharing programs that relate to open submission of IP. *See Patent Starter Program – Additional Information*, GOOGLE 1-2 <http://static.googleusercontent.com/media/www.google.com/en/patents/licensing/doc/patent-starter-program-more-information.pdf> (last visited Apr. 21, 2017) (“Google remains committed to finding useful and creative ways to help improve the patent landscape and has a history of supporting innovation and the startup community. To further these efforts, Google is offering eligible startups and developers the opportunity to join the Google Patent Starter Program. Before making your decision to participate, we strongly encourage you to review this process with an attorney.”); Allen Lo, *Announcing the Patent Purchase Promotion*, GOOGLE PUB. POL’Y BLOG (Apr. 27, 2015) <http://googlepublicpolicy.blogspot.com/2015/04/announcing-patent-purchase-promotion.html> (“We invite you to sell us your patents. The Patent Purchase Promotion is an experimental marketplace for patents that’s simple, easy to use, and fast. . . . So today we’re announcing the Patent Purchase Promotion as an experiment to remove friction from the patent market. From May 8, 2015 through May 22, 2015, we’ll open a streamlined portal for patent holders to tell Google about patents they’re willing to sell at a price they set. As soon as the portal closes, we’ll review all the submissions, and let the submitters know whether we’re interested in buying their patents by June 26, 2015. If we contact you about purchasing your patent, we’ll work through some additional diligence with you and look to close a transaction in short order. We anticipate everyone we transact with getting paid by late August.”); *Google Patent Programs*, GOOGLE, <http://www.google.com/patents/licensing/> (last visited Apr. 21, 2017) (“Google promotes innovation both within our company and throughout the technology ecosystem. In the spirit of fostering such innovation, we have embraced new models for sharing intellectual property across a variety of technology areas. Our programs include our release of open source software (like Android and VP8), our participation in community licenses (including the Open Invention Network License), and some newer initiatives like the Open Patent Pledge, the VP8 License and License on Transfer.”).

195. Infosys is an Indian business consulting company that does not deal with technology development or ownership of any patented technology. Communication with an Infosys corporate vice president confirmed that a patent-covered IP submission would be inapplicable to Infosys’ business groups.

10. Cognizant Technology	No policy ¹⁹⁶
--------------------------	--------------------------

Pharmaceutical ¹⁹⁷	Policy/Status
1. Novartis	Open patent submission
2. Roche Holding	Open patent submission
3. Pfizer	Open patent submission
4. Merck & Co.	Open patent submission
5. Novo Nordisk	No patent submission
6. Sanofi	Open patent submission
7. Actavis	No patent submission
8. Glaxo Smith Kline	Open patent submission
9. Bristol-Meyers Squibb	No patent submission
10. AbbVie	Open patent submission

B. Survey of Patent Submission Policies for top Patent Litigation Defendants

To understand how policies might relate to patent commercialization and enforcement, research was conducted into companies with the highest number of new patent infringement lawsuits filed against them. The 2013 and 2014 Lex Machina Patent Litigation Year in Review lists the top ten companies with the most patent cases filed against them.¹⁹⁸ The results in the following charts include the top

196. No reply or further patent submission policy detail was received after two emails to the Cognizant legal department. Email to Vice President and General Counsel for Cognizant Technology Solutions (July 8, 2015 and Aug. 19, 2015) (on file with author). While Cognizant is an IT consulting company similar to Infosys, the “NA” designation does not apply since a core portion of Cognizant’s business includes “complex systems development.” *Company Overview: Cognizant Technology Solutions Corp (CTSH US Equity)*, BLOOMBERG LAW, <https://www.bloomberg.com/quote/CTSH:US> (last visited Apr. 21, 2017). Further, Cognizant has been party to patent infringement lawsuits associated with their client software development and implementation. *See Kaavo, Inc. v. Cognizant Tech. Solutions Corp.*, No. 1:15-cv-00641, slip op. (D. Del. July 24, 2015).

197. FORBES, *supra* note 179 (follow “Pharmaceuticals” hyperlink from “All Industries” menu; then select “Market Value” hyperlink).

198. Brian Howard & Owen Bird, *2013 Patent Litigation Year in Review*, LEX MACHINA, <http://pages.lexmachina.com/rs/lexmachina/images/LexMachina->

ten defendants in the most new patent infringement cases, the number of cases they are defendants in, and the company patent submission policies.

2013 Defendants in Most New Cases

Defendant/Company ¹⁹⁹	Number of Cases	Policy/Status
Apple	59	No patent submission
Amazon	50	No patent submission
AT&T	45	No patent submission
Google	39	Open patent submission
Dell	38	Open patent submission
HTC	38	No patent submission
Samsung	38	No patent submission
Microsoft	35	No patent submission
LG	34	No patent submission
HP	34	No patent submission

2013%20Patent%20Litigation%20Year%20in%20Review.pdf (last visited Apr. 21, 2017); Brian Howard, *2014 Patent Litigation Year in Review*, LEX MACHINA, <http://pages.lexmachina.com/rs/lexmachina/images/2014%20Patent%20Litigation%20Report.pdf> (last visited Apr. 21, 2017).

199. Howard & Bird, *supra* note 198.

2014 Defendants in Most New Cases

Defendant/Company ²⁰⁰	Number of Cases	Policy/Status
Apple	58	No patent submission
Actavis	44	No patent submission
Samsung Electronics America Inc.	43	No patent submission
Amazon Inc.	41	No patent submission
Samsung Electronics Co LTD	38	No patent submission
Watson Laboratories Inc.	36	No patent submission
Google Inc.	35	Open patent submission
Samsung Telecommunications America LLC	35	No patent submission
Mylan Pharmaceuticals Inc.	34	Open patent submission
LG Electronics Inc.	33	No patent submission

C. Granted Patent Data for the Industries Surveyed

To better understand if the number of issued patents in a given industry relates to industry standards for patent submission policies, research was conducted into the number of utility patents granted in each of the four industries analyzed. The results in the following chart details the number of patents by industry for the three-year period between 2010 and 2014. The data was compiled with data from the U.S. Patent and Trademark Office (USPTO), Office of the Chief Economist.²⁰¹

The industries listed in the first column are separated between USPTO classifications with notes to corresponding NBER sub-categories. Footnotes with counts for specific USPTO patent class totals

200. Howard, *supra* note 198.

201. Patent Technology Monitoring Team, *Patenting By Geographic Region (State and Country) Breakout By NAICS Industry Classification: 1963 - 2012*, USPTO, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/naics/stc_naics_wgall/all_stc_naics_wg.htm (last updated Mar. 26, 2014 4:16 PM) (number of annual utility patents granted).

detail USPTO sub-classes that were aggregated to larger corresponding NBER categories. In addition to listing the total patent grants for the individual categories, the second column details the percentage of total patent grants to all patent grants for the given time period. Finally, Information Storage/Electronic Business Methods & Software, are separated from Computer Software, and Computer Hardware/Semiconductor Devices, since there may be overlap between the categories.

USPTO totals applied to NBER sub-categories ²⁰²	Total Patents Issued 2010-2014
²⁰³ Motors, Engines, Parts (53) / Transportation (55)	50,542 4%
²⁰⁴ Computer Hardware (22) / Semiconductor Devices (46)	160,782 13%
²⁰⁵ Computer Software (22)	61,812 5%
²⁰⁶ Information Storage (24) / Electronic Business Methods & Software (25)	113,391 9%

202. Alan C. Marco et al., *The USPTO Historical Patent Data Files: Two centuries of invention* 25 (U.S. PATENT & TRADEMARK OFFICE, Office of Chief Economist Working Paper No. 1, 2015), http://www.uspto.gov/sites/default/files/documents/USPTO_economic_WP_2015-01_v2.pdf; Office of Chief Economist, *Historical Patent Data Files*, U.S. PATENT & TRADEMARK OFFICE (July 6, 2015 10:24 AM EST), <http://www.uspto.gov/learning-and-resources/electronic-data-products/historical-patent-data-files> (follow “CSV” hyperlink under “Output files: annual”); Email from Amanda Myers, Economist, Office of Chief Economist, U.S. Patent & Trademark Office, to author (Sept. 2, 2015, 4:20 PM CST) (on file with author). The published report and data file categorized computer hardware and computer software patent grants together (NBER sub-category 22), so an email was sent to the USPTO Office of the Chief Economist to receive a breakdown of USPC classifications within NBER sub-category 22. Many thanks to the Office of the Chief Economist for sending the USPC classification breakdowns. From this data, the USPC classifications were separated into computer hardware and computer software based on USPC class descriptions.

203. Office of Chief Economist, *supra* note 202. Total patents granted 2010-2014: Motors, engines, parts (53) – 24,558; Transportation (55) – 24,984. *Id.*

204. *Id.*; Email from Amanda Myers, *supra* note 202. Total patents granted 2010-2014: Computer Hardware (22) – 83,582; Semiconductor devices (46) – 77,200. The USPC classes included for computer hardware include: Electrical Computers & Digital Processing Systems: Multicomputer data transferring, U.S. Patent Classification: 709 (27,205 total patents granted 2010-2014); Data processing: vehicles, navigation, & relative location, USPC: 701 (16,063); Electrical computers & digital processing systems: support, USPC: 713 (13,407); Error detection/correction & fault detection/recovery, USPC: 714 (12,822); Coded data generation or conversion, USPC: 341 (3,728); Cryptography, USPC: 380 (3,696); Photography, USPC: 396 (2,691); Electrical computers & digital processing systems: processing architectures & instruction processing (e.g., processors), USPC: 712 (2,137); Electrical computers: arithmetic processing & calculating, USPC: 708 (1,833). Office of Chief Economist, *supra* note 202; Email from Amanda Myers, *supra* note 202.

205. Email from Amanda Myers, *supra* note 202. USPC classes included for Computer software include: Image analysis, USPC: 709 (22,316); Data processing: presentation processing of document, operator interface processing, & screen saver display processing, USPC: 715 (10,412); Data processing: measuring, calibrating, or testing, USPC: 702 (8,467), Data processing: software development, installation, & management, USPC: 717 (8,245), Data processing: generic control systems or specific applications, USPC: 700 (8,159), Data processing: artificial intelligence, USPC: 706 (4, 213). *Id.*

206. Office of Chief Economist, *supra* note 202. Total patents granted 2010-2014: Information storage (24) – 60,349; Electronic business methods and software (25) – 53,042. *Id.*

	77,145
²⁰⁷ Drugs (31) / Misc. (drugs & med) (39)	6%
Total Patents Granted - All industries	1,281,103

D. Patent Submission Detail from an Outlier Open Patent Submission Policy Company—Google

While gathering information on patent submission policies, special attention was focused on outlier companies within a given industry to better understand their processes in comparison to peers. During this follow-up, one outlier, Google, offered to share patent submission intake data regarding its ongoing patent submission program and short-term (but proactive) Patent Purchase Program. The following information and data from these two programs may provide insights into what general large technology-driven companies might expect from an open patent submission policy.²⁰⁸

Google's continuous open patent submission program is called the "Google Patent Opportunity Submission."²⁰⁹ The program provides a web-portal based multi-step process for patent owners, attorneys representing patent owners, and patent brokers representing patent owners to submit patent detail "for a potential patent transaction."²¹⁰ The first step in the submission is for the submitter-patent-owner to "accept" a legal notice of terms and conditions. The terms are six paragraphs in length (less than one page), and include three important points: (1) Google will not treat the submission materials as confidential or protected by copyright; (2) the submission will not constitute notice or knowledge of any patent or claim for the purposes of willful infringement or inducement of infringement; and (3) neither party is obligated to enter into any business transaction as a result of the submission.²¹¹ Once these terms are agreed, two additional submission pages can be accessed. The first page requests information on the

207. *Id.* Total patents granted 2010-2014: Drugs (31) – 66,838; Misc. (drugs & med) (39) – 10,307. *Id.*

208. The following detail comes from conversation notes and email confirmations with Google Senior Patent Licensing Manager, Kurt Brasch, and Google Manager of Global Communications, Riva Litman; many thanks to them for organizing this data. Many thanks also to Google Patent Counsel Laura Sheridan for assisting with the introductions and the preliminary information shared during our lengthy conversations at the 2015 IP Scholars Conference.

209. *Patent Opportunity Submission*, GOOGLE, <https://www.google.com/intl/en/patents/opportunitysubmission/index.html> (last visited Apr. 21, 2017).

210. *Id.*

211. *Id.*

submitter and their relationship to the patent or patent portfolio presented in the submission.²¹² The second page requests details on the patent(s) including U.S. and foreign patent number(s) and application number(s), details on any litigation involving the patent(s), details on any current licenses involving the patent(s), details on if the patent(s) is/are standard-essential, and the primary technology areas for which the patent(s) relate.²¹³ According to Google's patent licensing manager, Google's ongoing open patent submission program receives thousands of patent submissions per year.²¹⁴

In contrast to the ongoing and reactive patent submission program, Google went a step farther to host a short-term proactive purchase program. In April 2015, Google widely advertised the following:

From May 8, 2015 through May 22, 2015, we'll open a streamlined portal for patent holders to tell Google about patents they're willing to sell at a price they set. As soon as the portal closes, we'll review all the submissions, and let the submitters know whether we're interested in buying their patents by June 26, 2015. If we contact you about purchasing your patent, we'll work through some additional diligence with you and look to close a transaction in short order. We anticipate everyone we transact with getting paid by late August.²¹⁵

Google planned the two-week program as an experiment with an intent to "translate into better experiences for sellers, and remove the complications of working with entities such as patent trolls."²¹⁶ One of the core motivations for the program was to cut off the supply of patents to Patent Assertion Entities (PAEs), especially patents from failed operating companies.²¹⁷

212. *Id.*

213. *Id.*

214. Telephone Interview with Kurt Brasch, Google Senior Patent Licensing Manager, and Riva Litman, Google Glob. Commc'ns and Pub. Affairs Manager, Google (Sept. 1, 2015); Email from Kurt Brasch, Google Senior Patent Licensing Manager (Sept. 8, 2015) (on file with author).

215. *Lo, supra* note 194.

216. *Id.*

217. Telephone Interview with Kurt Brasch and Riva Litman, *supra* note 214; Email from Kurt Brasch, *supra* note 214. In spring 2016 Google repeated the program in form but not directly to Google as recipient. The program was run through the patent intermediary (a "nonprofit industry group") Allied Security Trust. See *Welcome to IP3*, AST, <http://www.ip3ast.com/> (last visited April 21, 2017); Jeff John Roberts, *Tech and Auto Firms Join Google-Led Patent Purchase Program*, FORTUNE (May 18, 2016, 9:02 AM), <http://fortune.com/2016/05/18/patents-ip3/>; Cindy Stoller, *Calling All Patent Owners – Google, IBM, Ford, Cisco and Other Leading Global Companies Want to Buy Your Patens – Through the New IP3 Purchase Program by AST*, PR NEWSWIRE (May 18, 2016, 9:15 AM), <http://www.prnewswire.com/news-releases/calling-all-patent-owners—google-ibm-ford-cisco-and-other-leading-global-companies-want-to-buy-your-patents—through-the-new-ip3-purchase-program-by-ast-300270804.html>.

The results of the two-week proactive program were, in Google's view, a huge success.²¹⁸ During the limited time period, the number of patents submitted overwhelmed the submission system with a marketplace of patents for sale much higher than expected.²¹⁹ From Google's perspective, the response shows, amongst other things, that individuals have a hard time selling patents with PAEs being the only option in many circumstances.²²⁰ Specific results on the program include:

- “[I]n the thousands” of patents were submitted during the two-week program
- Google purchased 28% of patents that were deemed “relevant”²²¹
- Google paid between \$3,000 and \$250,000 for patents purchased as part of the program
- The median price for sale offered by patent submitters was \$150,000
- 50% of the patents submitted were offered for sale under \$100,000
- 20% of the patents submitted were offered for sale over \$1,000,000
- 33% of patents submitted were from patent brokers
- 25% of patents submitted were from individual inventors²²²

Google is currently reviewing further data on the program results and determining how to make potential changes in its Patent Purchase Program going forward.²²³

218. Telephone Interview with Kurt Brasch and Riva Litman, *supra* note 214; Email from Kurt Brasch, *supra* note 214.

219. Telephone Interview with Kurt Brasch and Riva Litman, *supra* note 214; Email from Kurt Brasch, *supra* note 214.

220. Telephone Interview with Kurt Brasch and Riva Litman, *supra* note 214; Email from Kurt Brasch, *supra* note 214.

221. Google deemed patents “relevant” if they satisfied both pricing and business components (business components being where submitted patents overlapped in Google business interest areas). Telephone Interview with Kurt Brasch and Riva Litman, *supra* note 214; Email from Kurt Brasch, *supra* note 214.

222. Telephone Interview with Kurt Brasch and Riva Litman, *supra* note 214; Email from Kurt Brasch, *supra* note 214.

223. Telephone Interview with Kurt Brasch and Riva Litman, *supra* note 214; Email from Kurt Brasch, *supra* note 214.

V. OBSERVATIONS ON PATENT SUBMISSION POLICY PATTERNS

A. *Observations on the Patent Submission Policy Survey*

In contrast to the more-standardized procedures used with screenplay and manuscript submissions and nineteenth century firm external patent-input focus, the survey of current patent submission policies in Part IV reveals no clear trends or standards. While the sample size is too small for empirical examination, observational patterns—especially within the same industry—show that significant policy differences are potentially not justified by differing business models. No explanation arises as to why Honda and Google have open patent submission policies and Toyota and Apple have no patent submission policies.

Beyond this global point, despite the limited dataset, some patterns are worthy to note in general discussion. First, non-U.S. companies seem to be more likely to not have any patent submission policies listed. Twelve of the 26 non-U.S. companies (46%) did not have patent submission policy details while only two of the 13 U.S. companies²²⁴ (15%) did not have policy details. Second, reviewing the industries in comparison to each other, while there is much randomness,²²⁵ Pharmaceutical firms are more likely to have open patent submission policies (seven of ten companies) while Computer Services and Computer Hardware firms are less likely to have open patent submission policies (one of nine and two of ten companies respectively).²²⁶

Turning to the survey of patent submission policies for the top patent litigation defendants, a trend emerges that generally the majority of top defendants have no patent submission policies—eight of the total ten for each year have no patent submission policies. Finally, comparing the total-patents-issued detail (Part IV.C.) to the general industry policy survey (Part IV.A.) reveals a correlation that industries having more issued patents are less likely to have open patent submission policies. For the total patents issued between 2010 and 2014, adding the Information Storage/Electronic Business Methods and Software patents with the Computer Services and Computer Hardware industry

224. The two U.S. companies with no patent submission policy details are: Facebook and Cognizant Technology.

225. See *infra* Section V.C.

226. The Pharmaceutical companies with open submission policies are as follows: Novartis, Roche Holding, Pfizer, Merck & Co., Sanofi, Glaxo Smith Kline, and AbbVie. Google is the only Computer Services company with an open submission policy. Computer Hardware companies include: Lenovo Group and Wistron.

categories²²⁷ results in over double the issued patents as compared to Automotive and Pharmaceutical. As the survey data shows, and perhaps due to this density, the Computer Services and Computer Hardware industries are correlatively less likely to have open patent submission policies.²²⁸

B. *Analysis of Google's Patent Submission Policy Data*

Likely the only conclusive observation to draw from the patent submission policy survey is that no standard patent submission practice can be established for large technology-oriented companies. Further, analyzing the specific (and unique) Google policy and patent submission details, in comparison to Google's computer services industry peers, does not reveal any explanation or justification regarding why other computer services firms do not adopt similar open patent submission policies. Regarding risk, the simple—less than a page—legal terms Google utilizes appear to insulate the company from any trade secret or copyright infringement risks as well as any implied contract or future increased patent infringement litigation damages risk. Further, regarding efficiency, the straightforward submission process Google utilizes assists with the review and processing time for the internal analysis of any submission within the most-applicable business group at the company. From a resources standpoint, as scholars have noted, the time it takes to review one patent for infringement is less than ten minutes, which would likely be even less for any patent by itself.²²⁹

Regarding the value Google finds from open patent submission procedures, the self-reported numbers from the two-week Patent Purchase Program provide insights. First, based on pre-determined relevancy standards, Google purchased over one-quarter of relevant patents submitted. While dollar figures were not disclosed, given the

227. See discussion *supra* Section IV.C. regarding reasons for overlap in these categories.

228. One important point to note regarding total patents in a given industry field is that more patents does not necessarily mean more third-party patents owned. It could be that percentages of patents owned by third-party patent submitters vs. commercializing firm patent owners varies between industries. A larger empirical study would need to be conducted to better define this correlation and any causation regarding policies and patent density.

229. Ted Sichelman, *Are There Too Many Patents to Search? A Response*, NEW PRIVATE LAW (last modified July 3, 2015), <https://blogs.law.harvard.edu/nplblog/2015/07/02/are-there-too-many-patents-to-search-a-response-ted-sichelman> (“Google employees estimated that its in-house attorneys spend 5-7 minutes determining whether a patent potentially covers any of the numerous products it offers.”). While this discussion centers on patent infringement determinations regarding existing products, the time to consider whether a patent unrelated to existing products is worthy of exploring for potential development is intuitively less—only time considering the patent by itself.

\$3,000-\$250,000 price per patent paid, this investment into submitted patents was likely substantial and not undertaken without perceived value to the company. Second, a \$150,000 median price for thousands of submitted patents, and over half the patents submitted for less than \$100,000, likely shows a substantial savings over other avenues of patent purchases.²³⁰ Indeed, a computer services industry patent purchased for less than \$100,000 almost approaches the \$23,000 cost of filing plus attorney fees to even obtain a patent.²³¹

Finally, potential differences between Google's two-week Patent Purchase Program and a firm's ongoing open patent submission policy may be important. First, the submission numbers during a first-of-its-kind, well-advertised program like Google's are likely much higher than would be expected from an ongoing program. Indeed, Google has an ongoing open patent submission policy, but still received thousands of submissions during the two-week program, likely due to statements that the company would not review any submissions until the end of the program combined with promises to review and pay for patents Google wished to purchase before short deadlines. Should a company adopt an ongoing patent submission program, the number of regular submissions would likely be fewer than the thousands of submissions Google received in a limited two-week period. Second, Google's Patent Purchase Program's requirement that submitters set an offer price for patents is a unique constraint that further limits Google's resources spent in negotiating a patent sale transaction.²³² Some have suggested that a large amount of patents with an offering price submitted (a large amount of data supporting an average price per patent) could result in Google receiving unfair anecdotal evidence for use as comparative data to other

230. Other options for patent purchases from broker-intermediaries, or trusted suppliers, would all include additional transaction costs not associated with a direct sale. Further, Google's median purchase price of \$150,000 shows considerable savings over the average patent brokerage sale price of \$360,000. See Kent Richardson et al., *The Brokered Patent Market in 2014*, 69 IAM MAG. 11, 15, 19 (2015), <http://www.iam-media.com/Magazine/Issue/69/Features/The-brokered-patent-market-in-2014>.

231. Gene Quinn, *The Cost of Obtaining a Patent in the U.S.*, IPWATCHDOG (Apr. 4, 2015), <http://www.ipwatchdog.com/2015/04/04/the-cost-of-obtaining-a-patent-in-the-us/id=56485> (Walking through a cost-breakdown example for obtaining a "[c]omputer implemented method for facilitating certain functionality via the Internet" and concluding "TOTAL COST through filing nonprovisional patent application = \$19,930.00 to \$22,880 (if provisional patent application is skipped the cost would be \$130 less)").

232. A price being required by submitters was not a requirement in any other open patent submission policy reviewed. With the property rights defined by the patent, and the price set by the submitter, the option for Google is accordingly left at "take it or leave it."

patents in litigation.²³³ While the aggregation of data is a potential risk broadly, the reality that Google simply streamlined the submission and negotiation process cannot be denied—a low-cost and effective way to determine if the company values a specific asset at a greater value than a seller, resulting in a transaction. Indeed, even if Google purchased low-value patents at a price greater than what they should transact for, the goal of cutting off supply of patents to PAEs would be achieved, an outcome desirable for patent owners, Google, and the entire patent system.²³⁴

C. Analysis of Patent Submission Policy Data to Legal Advice and Expectations

Analyzing the patent submission policy data from the perspective of patent owners reveals that a significant number of patent owners perceive the greatest value from their patents to be with a commercializing firm taking full ownership of the patent. The Google submission data demonstrates that in a limited two-week period, thousands of patent owners submitted their patents for sale with a set price, assuming Google may purchase. As the Google purchase team noted, the higher than expected amount of submissions shows—at least to Google—a clear abundance of patents owned by patentees who feel their patents would be valued higher for commercialization by others and are interested in communicating *directly* with commercializing firms. While many of the submitted patents are likely commercially worthless, as scholars have noted, “the patent ‘underdevelopment’

233. Kevin W. Christensen & Deepa Sundararaman, *A Closer Look at Google’s New Patent Program*, LAW360 (May 27, 2015), <http://www.law360.com/articles/659871/a-closer-look-at-google-s-new-patent-program> (“Irrespective of Google’s decision to accept or reject the offers for sale, this program would provide Google with information such as the average price per patent that Google could use as comparative data for patents in litigation. Perhaps the only sure benefit to the program is that Google will have acquired information on NPE activities that it may not have otherwise.”).

234. *Id.* (“Depending upon the number of patents offered for sale, and given the relatively short amount of time to respond, Google may have difficulty assessing the quality of the patents being sold and, in turn, the appropriateness of the offer price. Sellers on the other hand may have better information about the quality and intrinsic value of the patent because they have regularly evaluated the benefits relative to application, renewal, or licensing costs since the patent was issued or acquired. This creates an information asymmetry that may affect the price of patents and the types of patents being offered for sale. . . . Of course, scholarship on NPEs has described how patent ‘lemons’ are used to extract inappropriate royalty payments by exploiting litigation inefficiencies. From that perspective, buying low quality patents before NPEs can exploit them may provide a net gain. . . . The program’s desired impact on litigation is that it would diminish the role of NPEs, yielding better outcomes for both the patent owners and for Google.”).

problem arguably applies to a large share of potentially valuable inventions” as well—“the commercialization of a worthwhile invention never occurs.”²³⁵

Regarding analysis of the data on the firm-recipient side, the conclusion that no patent submission policy standard exists is remarkable. As with Hollywood screenplay and book manuscript publishing industries noted in Part II, one would expect clear patent submission standards to develop for efficient reasons uniformly across similarly situated technology firms. In contrast to standardized screenplay and manuscript submissions, however, technology firm patent submission policies are varied, and a significant number of firms do not have any policy at all. While some individual firms may have well-reasoned and efficient policies, the policy differences between similarly situated firms does not appear to have a clear justification. As discussed in Part I.E., there may be a number of unique factors for individual firms to consider when adopting unique policies. However, the lack of clear standards within industries rejects this notion.²³⁶ For example, given the low risk and minimal resources Google likely expends in its open patent submission policies, and the self-reported value it receives in purchasing patents through the programs, it is unclear why peer firms do not follow similar policies. The same question can be raised in the auto industry—why does Honda have an open patent submission policy but Hyundai and Toyota do not?

Returning to the review of legal advice given to technology firms in Part I.C., the best explanation for policy disparities is perhaps that no effective best legal practices have been established. While legal issues may be justified regarding open patent submission policies, blanket no patent submission policy recommendations are likely overly conservative for firm innovation-input needs. Accordingly, some firms have policies where business innovation input governs (firms utilizing open patent submission policies), and other similarly situated firms have policies where legal risk management governs (firms utilizing no patent submission policies). This is a substantially different situation than the post-*Desny* standards created in the movie production industry or the large submission acceptance priorities in the publishing industry. It is also significantly different than the nineteenth century practices of

235. Sichelman, *supra* note 3, at 343.

236. Perhaps one explanation for a lack of standards in patent-focused industries, as compared to screenplay and publishing, is that technology companies can survive without patent IP intake (relying on only internal IP). See *supra* text accompanying note 98. This explanation falls short, however, because no technology company has a zero-input need for external IP.

technology firm patent departments focused primarily on outside independent inventors for innovation-input.

Finally, while more data is needed, the patent submission policy survey patterns described in Section IV.A. do support the economic rationales discussed in Section I.E. First, pharmaceutical firms being more likely to have open patent submission policies over computer services and computer hardware firms may be explained by fewer granted patents in the pharmaceutical field (so less patent submissions to review), the complexity for patents being higher for pharmaceuticals (higher inventor sophistication so less outside inventors), and clarity in independent invention being easier for pharmaceuticals (where lab notes are detailed and over a much longer period of time to document invention).²³⁷ Second, the majority of top new patent defendants generally having no patent submission policies raises some interesting questions. One conclusion may be that, compared to their peers, higher litigation rates and higher litigation risks result in overly protective legal policies that conclude no patent submission policies are a best practice. Another conclusion may be that long-term no patent submission policies have increased the risk of patent infringement, created a corporate culture of “Not Invented Here” syndrome, and caused third-party patent owners, like the University of Wisconsin discussed earlier, to file suit to “get in the door to negotiate.”²³⁸ In short, firms may tailor their policies to prevent certain results but actually create the results predicted. Third, the pattern that industries with increased patent grants will likely have no patent submission policies may be explained by business decisions to block submissions where the number of third-party patents is high enough that consideration of submissions would be impractical and far outweigh the potential value that submission review may bring. As a final point, it is unclear what factors relate to non-U.S. companies overwhelmingly having a no patents submission policy or no policy at all.²³⁹ To better understand these factors, and others, a larger empirical

237. Another possible explanation for large pharmaceutical companies being more likely to have open patent submission policies is that their business models may focus on specialties in FDA pharmaceutical approval, or pharmaceutical manufacturing, with greater dependency on outside innovation input for new drug research and development.

238. Nocera, *supra* note 29; see also Adam B. Jaffe, Comment on *Inventors, Firms, and the Market for Technology in the Late Nineteenth and Early Twentieth Centuries*, in *LEARNING BY DOING IN MARKETS, FIRMS, AND COUNTRIES* 57 (Naomi R. Lamoreaux, Daniel M. G. Raff & Peter Temin ed., 1999) (noting the intentional business reasons to support a “not invented here” corporate culture).

239. Some potential reasons for the differences in non-US company policies include: policies were unable to be observed due to their existence on non-English portions of company websites; or international legal standards in favor of not posting policies publicly.

study of patent submission policies would need to be conducted as well as internal data on business policy reasons from individual firms.

D. Other Patent Submission Policy Issues and Implications

Before concluding, it should be noted that the survey and analysis of current patent submission policies presented here does not fully consider the entire marketplace of patent transactions, specifically the role of patent transaction intermediaries.²⁴⁰ As noted within the historical patent submission discussion, there are a number of reasons why technology firms changed innovation-input business models post-World War I and economists today generally conclude that utilization of patent intermediaries are most efficient while “arm’s-length purchase of inventions is . . . expensive and inefficient.”²⁴¹

While the efficiencies of utilizing side door patent intermediaries are likely impossible to test, and an industry shift towards less reliance on external R&D may properly result in less patent submission resources, firm policy changes to completely block patent submissions over the last century do not seem optimal or an efficiently evolved decision given the significant unexplained policy disparities presented in this paper. Indeed, much of the current legal advice to block submissions—and repeated exemplary citations to Apple’s no patent submission policy—falls prey to the fallacy of observed firm standards always being optimal.²⁴² Even critics of arm’s-length technology transactions speculate that these policies may have been a “second-best situation.”²⁴³ Accordingly, it is a reasonable conclusion that some firm policies to now block all patent submissions is an innovation-input policy overcorrection or an intentional firm-culture decision to support a “not invented here”²⁴⁴ business image. In 100 years, firms have transitioned from policies “determined not to overlook any possible source of technological advantage that might be obtained by purchasing

240. See *supra* text accompanying note 92.

241. See Jaffe, *supra* note 238, at 59.

242. This is the same argument as those accusing nineteenth century arm’s-length patent sale data as “falling prey to the fallacy of assuming that observed organizational forms are optimal.” *Id.*

243. *Id.*

244. See Crawford, *supra* note 69 (discussing corporate practices that view third-party inventions as being of lesser value than anything invented internally). One speculation for support of this type of business image is that firms may prefer to purchase IP with IP-development personnel as part of a larger business plan thus making the IP internal with the inventors as future company R&D employees. This discussion focuses on the position and value of intermediaries, outside the scope of this Article. Of note regarding patent submissions, however, is that this business model does not *require* a no patent submission (blocking) policy.

the patents of independent inventors”²⁴⁵ to “[the firm and] its employees do not accept or consider unsolicited . . . improved products or technologies, [and] product enhancements”²⁴⁶—which is an extreme shift.

Beyond analysis of efficiencies or internal business-image decisions, the only legal reason found in this research to support strict no patent submission policies is the risk of firms being subject to enhanced damages claims.²⁴⁷ While this threat does pose a real legal and financial risk, the no patent submission policies that result may be a frustration of the patent system’s intent to encourage disclosure, dissemination of inventions, and commercialization of technology.²⁴⁸

CONCLUSION

This review of current large technology firm patent submission policies reveals clear inconsistencies in policies between firms. While some policies may be grounded in sound legal risk management reasoning, it is unclear why similarly situated firms operate with such extreme policy differences—for example, why Google promotes and invites patent submissions and Apple actively discourages and legally blocks patent submissions. It is further unclear why submission policy standards have not evolved equally—and perhaps efficiently—in the process of patent submissions, especially for firms similarly situated within unique technology industries. The lack of consistency in patent submission policies is a stark contrast to nineteenth century procedures and far different than other types of IP submission standards in the movie screenplay and book publishing industry. This comparison alone lends to the need for greater research and discussion in this area of “front door” patent communications. Finally, given the importance of outside innovation to technology input, and the strong affront independent inventors receive when blocked from “front door” patent

245. Lamoreaux & Sokoloff, *supra* note 158, at 41.

246. APPLE, *supra* note 21.

247. *See supra* Section I.C.

248. An alternative view of no patent submission policies being a frustration of the patent system is that diversity in patent submission policies—open policies and blocking policies—is of value to the marketplace and a positive encouragement of “side door” patent communications. Given the concerns raised in this Article, however, it is suggested that a non-legally necessary no patent submission policy is likely not optimal for any firm. This issue will be the subject of a second article regarding the role and costs of patent intermediaries and a recommendation for patent submission improvements.

communications with large firms, perhaps firms should reevaluate their decisions to shut the doors on direct communications with third-party patent owners.