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Formerly Manufacturing Entities: Piercing the "Patent Troll" Rhetoric

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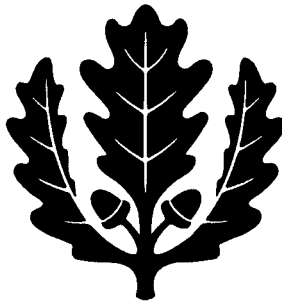
Formerly Manufacturing Entities: Piercing the “Patent Troll” Rhetoric

KRISTEN OSENGA

Everyone hates patent trolls—those companies that “hijack somebody else’s idea” and use the patents to “extort some money” from companies that actually make things. But, despite the rhetoric, not all patent trolls are created equal. This Article is the first to focus on one type of patent troll—the formerly manufacturing entity. These patent trolls used to make or do something in commerce, but now derive all or a significant portion of their income through licensing their intellectual property. Using case study analysis, this Article demonstrates that formerly manufacturing entities do not impose the harms associated with patent trolls more broadly and, in fact, provide unique benefits for commercialization of new technologies. Specifically, formerly manufacturing entities do not “sneak up” on manufacturing companies, waiting for them to invest extensively in a technology before seeking a license. Rather, the technology and the patents are already out in the open, having been practiced by the patent troll. Further, because formerly manufacturing entities have already worked to commercialize the technology, they are in a much better position to assess its value, as well as the costs and risks associated with bringing it to market. We should recognize the benefits formerly manufacturing entities add to commercialization and, in the larger scheme, ensure that potential patent reform measures and judicial solutions to the patent troll problem are carefully drawn so as not to do more harm than good.

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Formerly Manufacturing Entities: Piercing the “Patent Troll” Rhetoric

KRISTEN OSENGA*

I. INTRODUCTION

Everyone seems to hate “patent trolls.” Although this term has captured the public’s imagination and the government’s attention, it has proven difficult to define, even by the academics whose work is widely cited in support of the many criticisms of “patent trolls” today.¹ One often hears that “patent trolls” are companies or individuals that use patents to “extort some money” by filing lawsuits against manufacturing companies

* Professor of Law, University of Richmond School of Law. I am grateful for the extensive comments provided by John Duffy, Eric Claeys, Michael Risch, Mark Schultz, Adam Mossoff, Ryan Holte, Sean O’Connor, Stephen Yelderman, Christopher Beauchamp, Camilla Hrdy, Matt Barblan, David Schwartz, Corinna Lain, and Jim Gibson. This Article was written with the generous support of a Thomas Edison Innovation Fellowship from the George Mason University School of Law.

¹ See, e.g., James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 CORNELL L. REV. 387, 396 (2014) (“There is no consensus among researchers on the proper definition of [non-practicing entity, or patent troll.]”); *Demand Letters and Consumer Protection: Examining Deceptive Practices by Patent Assertion Entities: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Ins. of the Comm. on Commerce, Sci., & Transp.*, 113th Cong. 37 (2013) [hereinafter *Hearing*] (statement of Adam Mossoff, Prof. of Law, George Mason Univ. Sch. of Law, and Senior Scholar, Ctr. for the Prot. of Intellectual Prop.) (“[T]here is no settled, agreed-upon definition of PAE [i.e., patent assertion entity] or patent troll . . .”).

The Bessen & Meurer study is widely cited in the media and elsewhere for the nature and extent of problems caused by “patent trolls.” See, e.g., David Goldman, *Patent Trolls Cost Inventors Half a Trillion Dollars*, CNN MONEY (Sept. 21, 2011, 5:19 AM), http://money.cnn.com/2011/09/21/technology/patent_troll_cost/ (citing the Bessen & Meurer study to support Goldman’s assertion that “patent trolls create a very large disincentive to innovate”); Dara Kerr, *Patent Trolls Curb Innovation and Cost the U.S. \$ 29B in 2011*, CNET (June 26, 2012, 5:41 PM), <http://news.cnet.com/news/patent-trolls-curb-innovation-and-cost-the-u-s-29b-in-2011/> (citing the Bessen & Meurer study to support the proposition that patent lawsuits are becoming more prevalent and cost the United States \$29 billion in 2011); Rebecca J. Rosen, *Study: Patent Trolls Cost Companies \$ 29 Billion Last Year*, ATLANTIC (June 29, 2012, 7:37 AM), <http://www.theatlantic.com/technology/archive/2012/06/study-patent-trolls-cost-companies-29-billion-last-year/259070/> (using the Bessen & Meurer study to support the assertion that patent trolls “buy up software patents, don’t actually try and develop any products or sell anything, and then just sue people left and right for patent infringement”).

The Bessen & Meurer study, however, is not without critics. See, e.g., David L. Schwartz & Jay P. Kesam, *Analyzing the Role of Non-Practicing Entities in the Patent System*, 99 CORNELL L. REV. 425, 431–45 (2014) (systematically dismantling, throughout the entire article, many of Bessen & Meurer’s assertions and findings for both substantive and methodological failings).

(called “practicing entities”).² In response to this public uproar, multiple pieces of legislation have been proposed at the federal and state levels,³ and even courts have responded to the rhetoric concerning “patent trolls.”⁴ For these reasons, such a lack of a settled definition is important, and it is time to acknowledge this fact. It is time to replace rhetoric with reasoned policy analysis. Consider one example. In June 2011, Finnish mobile communications manufacturer, Nokia, settled a patent dispute with Apple.⁵ At the time, this was heralded as a positive event.⁶ In December 2012, Nokia settled another patent dispute with Research in Motion (RIM).⁷ This too was seen as advantageous, especially for Nokia. According to *Forbes* magazine, the company could use money from the settlement to “buy time for its smart phone business to get back on its feet” and to “mitigate the impact of what could be a lengthy Windows Phone transition process.”⁸ Fast-forward nine months to Nokia’s agreement to license its patents to

² President Obama made the “extortion” comment during a Google Hangout in response to a question from “an entrepreneur,” who expressed concerns about patent trolls and software patents. See Ali Sternburg, *Obama Acknowledges Patent Troll Problem [w/ Transcript]*, PATENT PROGRESS (Feb. 14, 2013), <http://www.patentprogress.org/2013/02/14/obama-acknowledges-patent-troll-problem-w-transcript/> (citing an example of how President Obama perceives the actions of patent trolls). See also Dustin Volz, *White House on Patent Trolls: It’s Your Turn, Congress*, NAT’L J. (Feb. 21, 2014), <http://www.nationaljournal.com/tech/white-house-on-patent-trolls-it-s-your-turn-congress-20140221> (reporting on the White House’s new executive actions designed to deter abuse of the patent system and combat patent trolls).

³ Federal legislative initiatives include, among many others, the Innovation Act, H.R. 3309, 113th Cong. (2013) (enacted), the Patent Transparency and Improvements Act of 2013, S. 1720, 113th Cong. (2013), and the Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013, H.R. 845, 113th Cong. (2013). State legislation includes Bad Faith Assertions of Patent Infringements, VT. STAT. ANN. tit. 9, §§ 4195–99 (2013), and S.B. 1540, 77th Leg., Reg. Sess. (Or. 2014) (enacted).

⁴ Two cases were argued before the Supreme Court in 2014 that involved issues related to patent trolls, such as standards for fee-shifting in patent infringement cases. See *Highmark v. Allcare Health Mgmt. Sys.*, 134 S. Ct. 1744, 1749 (2014) (“[A]n appellate court should apply an abuse-of-discretion standard in reviewing all aspects of a district court’s [Patent Act] § 285 determination.”); *Octane Fitness v. Icon Health & Fitness*, 134 S. Ct. 1749, 1752 (2014) (stating that under § 285 of the Patent Act, the court may award reasonable attorneys fees to the prevailing party in exceptional cases).

⁵ See, e.g., Press Release, Nokia, Nokia Enters into Patent License Agreement with Apple (June 14, 2011, 8:05 AM), available at <http://company.nokia.com/en/news/press-releases/2011/06/14/nokia-enters-into-patent-license-agreement-with-apple> (“This settlement demonstrates Nokia’s industry leading patent portfolio and enables us to focus on further licensing opportunities in the mobile communications market.”).

⁶ See, e.g., Florian Mueller, *Apple and Nokia Settle Patent Dispute—See I Told You So: Apple Pays*, FOSS PATENTS (June 14, 2011, 7:09 AM), <http://www.fosspatents.com/2011/06/apple-and-nokia-settle-patent-dispute.html> (“This [settlement] frees up resources for both Apple and Nokia.”).

⁷ Press Release, Nokia, Nokia and RIM Enter into New Patent License Agreement (Dec. 21, 2012), available at <http://press.nokia.com/2012/12/21/nokia-and-rim-enter-into-new-patent-license-agreement>; see also Trefis Team, *RIM Settlement Shows There is Value in Nokia’s Patents*, FORBES (Jan. 2, 2013, 4:15 PM), www.forbes.com/sites/greatspeculations/2013/01/02/rim-settlement-shows-there-is-value-in-nokia-s-patents/?utm_medium=referral&utm_source=t.co (noting that Nokia and RIM’s agreement enables Nokia to dedicate its efforts to “furthering licensing opportunities in the mobile communications market”).

⁸ Trefis Team, *supra* note 7.

Microsoft in September 2013.⁹ Now, instead of being celebrated, the agreement resulted in Nokia being branded as a “patent troll.”¹⁰ In all three instances, the same company licensed its patents to various manufacturing companies. Yet only the third license made people revile Nokia as a “patent troll.” Why does a licensing business model cause concern simply because the company that owns the intellectual property no longer employs a manufacturing business model as well?

This question is not one of idle curiosity or academic musing, especially given that widespread criticism of the licensing business model is driving real-world legislation and court decisions. Even many academics employing this term—or its synonyms, such as “non-practicing entity” or “patent assertion entity”—fail to acknowledge the existence of differing business models in the innovation industries that bring patented technology (such as smart phones and tablets) to the marketplace.¹¹ Initially, the bulk of scholarship and broader public commentary appears to be anti-“patent troll”; however, scholarship and broader public commentary are non-differential about what or who should be classified as a “patent troll.”¹² Very few articles consider that the companies and individuals falling

⁹ Press Release, Microsoft, Microsoft to Acquire Nokia’s Devices & Services Business, License Nokia’s Patents and Mapping Services (Sept. 3, 2013), available at <http://www.microsoft.com/en-us/news/press/2013/sep13/09-02announcementpr.aspx>.

¹⁰ See, e.g., Brian Fung, *Is Nokia About to Become a Patent Troll?*, WASH. POST BLOG (Sept. 3, 2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/09/03/is-nokia-about-to-become-a-patent-troll/> (noting that Nokia resembles a patent troll because it is “[s]elling Microsoft its smartphone business [to] clear the way for Nokia to enforce its patents more aggressively”); Mike Masnick, *What’s Left of Nokia Poised to Become a Giant Patent Troll*, TECHDIRT (Sept. 10, 2013, 8:58 PM), <https://www.techdirt.com/articles/20130907/23551524443/whats-left-nokia-poised-to-become-giant-patent-troll.shtml> (noting that a mischaracterization of the Nokia-Microsoft deal, which shows that Microsoft paid \$7.2 billion to buy Nokia, may portray Nokia as being a “massive, annoying patent troll”).

¹¹ Christopher A. Cotropia et al., *Unpacking Patent Assertion Entities (PAEs)*, 99 MINN. L. REV. (forthcoming 2014), available at papers.ssrn.com/sol3/papers.cfm?abstract_id=2346381 (noting that previous patent assertion entity studies failed to look “beyond the simple PAE or non-PAE” distinction).

¹² See, e.g., Bessen & Meurer, *supra* note 1, at 387, 396 (“It is surely difficult to attempt to distinguish ‘good’ from ‘bad’ [trolls] . . .”); Colleen V. Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 300, 320 (2010–2011) (stating that patent trolls were seen as “entities that use their patents primarily to get licensing fees rather than to support the development or transfer of technology,” but now there are “many kinds of entities, each with its own . . . patent strategy,” and noting that it is now hard to distinguish between good and bad trolls); Sara Jeruss et al., *The America Invents Act 500: Effects of Patent Monetization Entities on US Litigation*, 11 DUKE L. & TECH. REV. 357, 366 (2012) (“There . . . has been considerable disagreement about the type of entity to include in the category of ‘non-practicing entity.’”); Brian J. Love, *An Empirical Study of Patent Litigation Timing: Could a Patent Term Reduction Decimate Trolls Without Harming Innovators?*, 161 U. PA. L. REV. 1309, 1314–15 (2013) (noting the difficulty in determining whether “patent trolls” are “extortionists” or helpers in disseminating useful technology); Jason Rantanen, *Slaying the Troll: Litigation as an Effective Strategy Against Patent Threats*, 23 SANTA CLARA COMPUTER & HIGH TECH. L.J. 159, 163–64 (2006) (noting “the difficulty of defining exactly what a patent troll is”).

within the scope of this pejorative label represent wide-ranging and differing entities and business models.¹³

This is a significant gap in the scholarship which needs to be remedied. Thus, this Article takes the first steps toward rectifying this problem. This Article examines several commercial entities that were once manufacturers but now devote all or a significant portion of their business model to licensing their patented innovation. In avoiding the inherent problems identified above in the rhetorical epithet “patent troll,” this Article instead refers to these types of companies as “formerly manufacturing entities.” (For the same reasons, this Article will also use the term “licensing business model” instead of the “troll” label.) Examples of formerly manufacturing entities include IBM,¹⁴ MOSAID (now Conversant),¹⁵ and General Electric. General Electric continues to make products, but also engages in extensive licensing of its large patent portfolio, including many patents covering technology that it does not manufacture.¹⁶ It is unsurprising, given the lack of precision in the rhetoric, that these companies have been attacked as “patent trolls,” despite their past or ongoing commitment to manufacturing.¹⁷

As a first step in developing more rigorous scholarship on the patent licensing business model, this Article uses case studies to analyze formerly manufacturing entities. These case studies make two important

¹³ See, e.g., John R. Allison et al., *Extreme Value or Trolls on Top? The Characteristics of the Most-Litigated Patents*, 158 U. PA. L. REV. 1, 10 tbl.1 (2009) (identifying twelve classes of patent plaintiffs, including eleven non-practicing entities); Cotropia et al., *supra* note 11 (defining different categories of patent assertion entities); Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2126–27 (2013) (identifying three troll business models); James F. McDonough III, Comment, *The Myth of the Patent Troll: An Alternative View of the Function of Patent Dealers in an Idea Economy*, 56 EMORY L.J. 189, 192–93 (2006) (identifying three very general types of patent trolls); Schwartz & Kesan, *supra* note 1, at 426 (noting that the group of patent holders deemed “non-practicing entities” is quite heterogeneous).

¹⁴ See, e.g., David Kirkpatrick, *The Future of IBM*, FORTUNE, Feb. 18, 2002, at 62, 63, 65 (noting that IBM was originally only competing at the product level, however “[t]hroughout the Gerstner years IBM has been the world leader in new patents; it earns well over \$1 billion a year licensing those patents”).

¹⁵ See, e.g., *Our Portfolio*, CONVERSANT, www.conversantip.com/our-portfolio/ (last visited Aug. 29, 2014) (noting that Conversant originally developed semiconductor and computer memory technology but now focuses on licensing its intellectual property portfolio).

¹⁶ See, e.g., Richard Goldstein, *GE’s IP Counsel Takes a Surprising Position on So-Called “Patent Trolls”*, RICH GOLDSTEIN (Apr. 8, 2013), <http://richgoldstein.com/2013/04/08/ge-ip-counsel-takes-a-surprising-position-on-patent-trolls/> (noting that GE does not “necessarily make a product for every patent they eventually assert against another entity”).

¹⁷ See, e.g., Ben Kepes, *IBM’s New Strategies – Patent Trolling and Dodgy Advertising*, FORBES (Nov. 4, 2013 2:39 PM), <http://www.forbes.com/sites/benkepes/2013/11/04/ibms-new-strategies-patent-trolling-and-dodgy-advertising/> (alleging that some of IBM’s business decisions constitute patent trolling); Stacey Vanek Smith, *You May be Surprised Who Is a ‘Patent Troll’*, MARKETPLACE (June 4, 2013, 2:16 PM), <http://www.marketplace.org/topics/tech/you-may-be-surprised-who-patent-troll> (noting that big technology companies such as GE “use software patents to sue little technology companies”).

contributions to the existing literature on the licensing business model. First, they establish that there are in fact numerous types of commercial entities and business models in the innovation industries. This Article provides some much-needed data on this vital point about the commercialization of patented innovation. Second, as a byproduct of the first point, the case studies suggest that scholars should be more precise than they have been thus far in identifying specific business models and commercial practices before they broadly condemn any companies or commercial activities. At a minimum, this Article serves as a reminder that different business models create different costs and benefits in the commercialization of patented innovation. Thus, normative assessments, as well as legislative or judicial changes in the law, should not be made on the basis of ill-defined and empirically unverified rhetoric.¹⁸

This Article proceeds as follows. Part II reviews current thinking on the licensing business model, explains the relationship between patents and commercialization, and then connects the two to explore the effects of the licensing business model on commercialization. Part III explains why the case-study method is the proper tool for this analysis. It then details the case studies, which are based on researching several formerly manufacturing entities and interviewing representatives of these companies. Part III concludes with observations about what these formerly manufacturing entities have in common and provides additional illustrations of these common features. Part IV discusses some legal and policy implications that follow from these case studies, redefines “commercialization,” and demonstrates how formerly manufacturing entities provide unique benefits for commercialization, such as greater market efficiencies from disclosures of patents previously owned by individuals or small entities, and better valuation of patented innovation in the marketplace. This Article concludes with suggestions of some potential broader implications and identifies directions for future research.

II. PATENTS, LICENSING, AND COMMERCIALIZATION

Before delving into how formerly manufacturing entities represent one type of the licensing business model, it is important to understand the history of the “patent troll” label as applied to the licensing business model. It is also important to understand the licensing business model generally and the commercial context of why companies who used to manufacture products would then shift to licensing. In addition, this Part provides a detailed discussion of commercialization and the role of patents in converting inventions created in garages or in research and development

¹⁸ See, e.g., *Hearing*, *supra* note 1, at 37, 38, 43 (failing to find a settled definition or a scientifically substantive study that has proven an actual problem by the patent licensing model).

departments into actual products and services sold to consumers in the marketplace. This Part's conclusion connects these points by explaining both sides of the policy debate over patent licensing: either licensing hinders commercialization or it facilitates bringing new products to market.

A. *The Birth and Expansion of the "Patent Troll" Label*

As noted in the introduction, there is no settled definition of a "patent troll."¹⁹ The term is explicitly pejorative in whatever context it is defined or used; the companies or individuals so labeled are accused of harming innovation or the economy generally.²⁰ Before presenting the case studies, a very brief review of the "patent troll" debate is helpful to establish how this epithet has grown more expansive over time and now encompasses the formerly manufacturing entities surveyed later in this Article.

The story of the "patent troll" begins fairly innocuously, if not ironically. The term was first coined in 2001 by Peter Detkin, then-assistant general counsel for Intel Corporation, to describe an entity that made money from patent licensing (entered into directly or after litigation), as opposed to developing, manufacturing, and selling the patented technology.²¹ At the time, Detkin was referring to TechSearch LLC, a patent licensing firm that had recently sued Intel.²² Today, Detkin is a co-

¹⁹ Bessen & Meurer, *supra* note 1, at 396 & n. 43.

²⁰ See, e.g., *id.* at 397; Robin Feldman & Thomas Ewing, *The Giants Among Us*, 2002 STAN. TECH. L. REV. 1, 1 (2012), <http://stlr.stanford.edu/pdf/felman-giants-among-us.pdf> ("Troll activity is generally reviled by operating companies as falling somewhere between extortion and a drag on innovation."); Lemley & Melamed, *supra* note 13, at 2124 ("[T]rolls cost the economy \$500 billion over the last twenty years, mostly in the IT industry. Other reports suggest that patent trolls inhibit innovation at the firms they sue."); Ted Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341, 368, 384 (2010) ("[Patent trolls] tend to exploit litigation and licensing market defects to extract unwarranted rents from commercializers . . .").

²¹ Brenda Sandburg, *Trolling for Dollars*, RECORDER, July 30, 2001, at 1; Susan Hansen, *The 'Original Patent Troll' Is Back With a New NPE Venture*, CASCADES VENTURES (Sept. 14, 2012), <http://cascadesventures.com/press/4/original-patent-troll-back-new-npe-venture> (noting that previously-termed "patent troll" companies—which are now-termed "nonpracticing entities"—specialize in securing patent licensing deals as opposed to actually manufacturing products).

²² See Sandburg, *supra* note 21 (noting that Detkin originally referred to TechSearch LLC as a "patent extortionist," but chose "patent troll" as an alternative when TechSearch added libel to their complaint).

Recently, Detkin explained that many people have misunderstood his original statement about TechSearch. See Patrick Anderson, *Do NPEs "Cost" Us \$29 B? Intellectual Venture's Co-Founder Peter Detkin Sets the Record Straight*, GAMETIME IP (June 28, 2012), <http://gametimeip.com/2012/06/28/do-npes-cost-us-29-b-intellectual-ventures-co-founder-peter-detkin-sets-the-record-straight/> (quoting Peter Detkin as saying "[w]hen I coined the term 'troll' more than 10 years ago I was talking about people who take specious patents that were likely invalid and asserted them broadly across an industry to extract nuisance value settlements.").

founder and vice-chairman of Intellectual Ventures, a company that has been called “Patent Troll Public Enemy #1.”²³

Since 2001, the definition of “patent troll” has vastly expanded, although the reasons for this expansion and the conflicting definitions are not exactly clear. For example, the Federal Trade Commission (FTC) labels “patent assertion entities” as “firms whose business model primarily focuses on *purchasing* and asserting patents.”²⁴ However, a recent law review article by Mark Lemley and Douglas Melamed defines “patent trolls” as “patent owners whose primary business is collecting money from others that allegedly infringe their patents.”²⁵ The FTC’s adoption of the allegedly more genteel term “patent assertion entity”²⁶ was based on the work of Colleen Chien, who coined and defined this phrase as a company whose primary business is to assert patents.²⁷ She explicitly excludes universities and startups from this definition, contrary to James Bessen and Michael J. Meurer’s definition of their similar term, “non-practicing entity.”²⁸ Although the FTC adopted her phrase, Chien’s definition does not include the requirement of purchasing patents. Notably, Lemley and Melamed’s definition also does not require either the purchase of patents for the sake of licensing or the lack of development of the patented technology by the asserting entity.²⁹ Despite these various and conflicting

²³ Gene Quinn, *Intellectual Ventures Becomes Patent Troll Public Enemy #1*, IP WATCHDOG (Dec. 9, 2010, 1:39 PM), <http://ipwatchdog.com/2010/12/09/intellectual-ventures-becomes-patent-troll-public-enemy-1/id=13711>; see also *When Patents Attack! Transcript*, THIS AMERICAN LIFE (July 22, 2011), <http://www.thisamericanlife.org/radio-archives/episode/441/when-patents-attack> (“[B]log IPWatchdog called Intellectual Ventures patent troll public enemy number one.”).

²⁴ FED. TRADE COMM’N, *THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION*, 8 & n.5 (Mar. 2011) (emphasis added), available at <http://www.ftc.gov/os/2011/03/110307/patent-report.pdf>.

²⁵ Lemley & Melamed, *supra* note 13, at 2118. Economic literature utilizes a similar definition. See Julien Péinn, *Strategic Uses of Patents in Markets for Technology: A Story of Fabless Firms, Brokers, and Trolls*, 84 J. ECON. BEHAV. & ORG. 633, 633 (2012) (“NPEs are firms that rarely or never practice their patents, and instead focus on earning licensing fees.”).

²⁶ *Hearing*, *supra* note 1, at 37. Additionally, “patent troll,” “patent assertion entity,” and “non-practicing entity” are all terms that have been used to describe the firms engaged in licensing business models. It is generally accepted that “patent troll” is derogatory; others find “patent assertion entity” derogatory because it infers a business model based on litigation (assertion). “Non-practicing entity” is a bit more neutral. However, it is often viewed as overly inclusive because, on its face, it includes universities, research institutions, and other licensing organizations that have not found disfavor.

²⁷ Colleen Chien, *Patent Trolls by the Numbers*, SANTA CLARA L. FAC. PUBL’NS (Mar. 13, 2013), <http://digitalcommons.law.scu.edu/facpubs/609/>; see also Lemley & Melamed, *supra* note 13, at 2126–27 (listing the three types of patent trolls).

²⁸ *Id.* This is a shift from an earlier, more restrained definition by Chien, who said, “The term NPE generally refers to a patentee that does not make products or ‘practice’ its inventions. Over time, the definition has narrowed to exclude actors in the innovation enterprise who engage in significant research and development activities and individual inventors who seek to commercialize their inventions.” 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, 1577–78 (2009).

²⁹ Lemley & Melamed, *supra* note 13, at 2118.

definitions of what constitutes a “patent troll,” one thing on which they all seem to agree is that the company’s income—or at least a substantial portion of income—comes from *licensing patents* rather than inventing, building, or selling something to consumers.⁵⁰

As the definition of the “patent troll” moniker has expanded to cover all types of licensing business models, the number and types of companies that fall within the scope of this pejorative label has expanded as well. Previously, companies that made or sold products were exempt from the “patent troll” label, even if their business models were based in part on licensing. For example, a 2011 article observed without condemnation that computer giant IBM “became famous for flexing its huge patent portfolio to force companies to fork over some cash.”³¹ It is noteworthy that the article followed the FTC definition and did not label IBM as a “patent troll,” thus differentiating IBM from the commercial entities that only “*buy up* and leverage patent portfolios for licensing fees.”³² But with the expanded definition of this term, IBM is now often attacked as a “patent troll.”³³

With the increased breadth of the patent troll definition, however, even commercial firms that currently invent, manufacture, or sell products to consumers have fallen victim to this epithet.³⁴ Many people, for instance, might be surprised that “patent troll #1”—Intellectual Ventures—actually employs hundreds of full-time inventors to create new products and

³⁰ Not all licensing business models involve large patent portfolios. For example, Lemley and Melamed describe one type of patent troll who seeks to litigate and win a big victory on one strong patent. See Lemley & Melamed, *supra* note 13, at 2126 (“The first and most traditional model is a company that owns a patent and hopes to strike it big in court.”). Other trolls, however, do base their licensing models on large portfolios of patents, either in one sector of technology or across many technology areas. See *id.* (“A final group of trolls is engaged in the business of patent aggregation.”).

³¹ James Temple, *Patent-Lawsuit Offensive Can Be Patently Offensive*, S.F. CHRON., July 31, 2011, at D1.

³² *Id.* (emphasis added).

³³ Despite the 2011 article, see *supra* note 31, others have been more willing to deem IBM a patent troll. See, e.g., Joseph N. Hosteny, *Litigators Corner: Is IBM a Patent Troll?*, INTELL. PROP. TODAY, May 2006, at 26 (comparing IBM’s methods of obtaining and licensing patents similar to the individuals “excoriated . . . as trolls”); see also Adam Mossoff, *The Nadir of “Patent Troll” Rhetoric*, CPIP BLOG (Nov. 13, 2013), <http://cpip.gmu.edu/2013/11/13/the-nadir-of-patent-troll-rhetoric/> (“This reveals the absurdities we’ve reached today in the patent policy debates, when, by the very terms of the critics of the patent licensing business model, we can no longer differentiate between 100-year-old firms who have long served an important commercial role in the innovation industries, such as IBM, and the companies that the critics are in fact complaining about, such as Personal Audio (podcasting patent) and Lodsys (online payment and feedback).”).

A book has been written about IBM’s changing business model. See generally LOUIS V. GERSTNER, JR., *WHO SAYS ELEPHANTS CAN’T DANCE: INSIDE IBM’S HISTORIC TURNAROUND* (2002).

³⁴ See Bessen & Meurer, *supra* note 1, at 395 (including, within their definition of patent trolls, “operating companies asserting patents well outside the area in which they make products and compete”).

services,³⁵ recreating in the twenty-first century Thomas Edison's nineteenth-century invention of an invention factory business model.³⁶ It is therefore unsurprising that formerly manufacturing entities that are no longer making or selling something, but instead are licensing or asserting patents, have also run afoul of the "patent troll" label.

B. Patent Licensing and Commercialization

As should be clear, the single attribute that unites all of the varying and sometimes conflicting definitions of a "patent troll" is that it is an individual or company that has adopted a licensing business model (through either direct negotiations or settlement of patent infringement lawsuits). This is why the expansion of the "patent troll" label includes formerly manufacturing entities, as they now license their patented innovation. To fully understand the licensing business model, it is first necessary to frame the context in which it exists: as just one business model in the commercialization of patented innovation.

Broadly speaking, commercialization is simply the process of introducing a new product or process to the market.³⁷ As a practical matter, however, commercialization of an invention is anything but simple; it involves many follow-on innovative or risky financial steps between the generation of an idea and the provision of an actual product to the market and consumers. First, the invention must be transformed from an idea into some sort of marketable embodiment of that idea.³⁸ Second, facilities to mass-produce the marketable embodiment must be created, contracted with, and configured.³⁹ Third, channels for distributing the marketable embodiment to the relevant consumer must be arranged.⁴⁰ Finally, consumers must be made aware of the existence and availability of the new

³⁵ See *Intellectual Ventures Corporate Fact Sheet*, INTELL. VENTURES (2013), http://www.intellectualventures.com/assets_docs/IV_Corporate_Fact_Sheet_2.pdf (asserting that Intellectual Ventures has more than "4,000 active inventors and 400 universities and institutions in [its] international network").

³⁶ See Adam Mossoff, *Thomas Edison Was a "Patent Troll"*, SLATE (May 19, 2014), http://www.slate.com/articles/technology/history_of_innovation/2014/05/thomas_edison_charles_good_year_and_elias_howe_jr_were_patent_trolls.single.html (stating Edison should have continued "inventing in his lab and selling or licensing his patents to others to manufacture and sell his innovative products" rather than embark on generally unsuccessful business ventures).

³⁷ For a term that is frequently and flippantly tossed about, commercialization is rarely given a precise or illuminating definition. For one definition, see U.S. CONGRESS, OFFICE OF TECH. ASSESSMENT, OTA-BP-ITC-165, INNOVATION AND COMMERCIALIZATION OF EMERGING TECH. 2 (1995) ("*Commercialization*" [is] the attempt to profit from innovation through the sale or use of new products, processes, and services.") (emphasis in original).

³⁸ See, e.g., F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697, 707–08 (2001) ("The invention must be developed into some commercial embodiment.").

³⁹ *Id.* at 708.

⁴⁰ *Id.*

product.⁴¹ Moreover, each of these steps requires its own additional resources in the form of both capital and labor.⁴²

As the initial creator of the new product (or first-mover) expends these resources to get the product to market, there will be other participants (second-movers) competing to obtain a share of the market.⁴³ Some expenses are borne by both first-movers and second-movers, such as obtaining and configuring production facilities.⁴⁴ There is a wealth of literature, however, that touts “second-mover advantages.”⁴⁵ Second-movers will be exempt from some of the costs because they can rely on resources spent by the first-mover.⁴⁶ For example, the efforts put in by the first-mover to make consumers aware of the existence of a new product will not need to be fully replicated by a second-mover, who only needs to let the consumer know that they have the same product available.⁴⁷ A second-mover also has non-resource based advantages over a first-mover competitor, including risk aversion or avoidance based on the observed success (or failure) of the first-mover.⁴⁸

The patent system steps in to encourage commercialization by providing the first-mover with its own advantages.⁴⁹ A patent gives the first-mover a property right in an invention.⁵⁰ This property right can “provide an incentive to invest risk capital for commercialization . . . considered to be ‘usually the most expensive part of the long haul’” from

⁴¹ *Id.*

⁴² *Id.*

⁴³ *See id.* (stating that second movers will “subsequently move to compete at each step of the larger endeavor”).

⁴⁴ *Id.*

⁴⁵ *See* Sichelman, *supra* note 20, at 373 (stating that there is ample literature on advantages “whereby a follower is able to reap the benefits of a first-mover’s efforts at a much lower cost”).

⁴⁶ *See* Kieff, *supra* note 38, at 708 (“Some costs, however, will be borne only by the first mover, because once incurred they will yield benefits for the entire class of competitors, embracing first movers and second movers.”).

⁴⁷ *See id.* at 709 (“Similarly, the education of consumers and arousal of consumer demand will benefit all competitors equally.”).

⁴⁸ *See id.* (“[A] second mover’s mere knowledge of a first mover’s success eliminates a great deal of risk from the second mover’s decision whether to embark on the same enterprise. The mere knowledge that a problem has been solved may provide psychological motivation to attempt a solution.”).

⁴⁹ *See* Stuart Minor Benjamin & Arti K. Rai, *Who’s Afraid of the APA? What the Patent System Can Learn from Administrative Law*, 95 GEO. L.J. 269, 274–75 (2007) (“[M]ost patent scholars would agree that patents can, and should, be used in some measure to promote both invention and commercialization.”); *see also* Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 276 (1977) (advancing the prospect theory for the patent system based on promoting commercialization).

⁵⁰ *See* 35 U.S.C. § 261 (2012) (“[P]atents shall have the attributes of personal property.”); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730 (2002) (“The [patent] monopoly is a property right . . .”).

idea to market.⁵¹ In particular, the first-mover is able to exclude competition for a limited time, allowing him to potentially charge a higher price to procure recoupment of costs.⁵² Without this exclusive period, the patentee must compete with a second-mover, who has fewer costs to recoup and who can charge less without losing profitability; the patentee may have to charge a lower price to remain competitive.⁵³ At the lower price, the first-mover/patentee may not be able to fully recapture his costs of invention and commercialization.⁵⁴

Most discussions about the commercialization process focus only on firms that bring a product from idea to market as one entity, or companies that are vertically integrated. However, manufacturing today often involves vertically disintegrated entities; in these cases, patent protection is even more necessary.⁵⁵ Patents facilitate entry of specialized firms (or inventors) upstream, which pass along new ideas to specialized producers (or commercializers) downstream to allow for specialization gains, as well as upstream and downstream economies of scale.⁵⁶ Without patent protection, the transfer of an idea from inventor to producer is unlikely due to Arrow's information paradox.⁵⁷

The property right afforded by a patent is important for several reasons. First, the exclusive right granted to the owner protects the first-mover inventor and allows for information transfer. In addition, it allows for injunctive relief to potentially be rewarded as a remedy for patent infringement.⁵⁸ This provides a credible threat, ideally deterring second-

⁵¹ See Kieff, *supra* note 38, at 743 (internal citation omitted).

⁵² See Adam Mossoff, *Exclusion and Exclusive Use in Patent Law*, 22 HARV. J.L. & TECH. 321, 327–28 (2009) (discussing a patent's right of exclusion); see also Christopher A. Cotropia, *What Is the "Invention"?*, 53 WM. & MARY L. REV. 1855, 1898–99 (2012) ("As the story goes, price control via patent exclusivity allows the inventor to recoup her investment.").

⁵³ See Kieff, *supra* note 38, at 710 n.62 (providing reasons why patents' right to exclude provides incentives for patentees to bear the initial costs).

⁵⁴ See *id.* (reasoning that without the right to exclude, a patentee would face losing all sales to a competitor unless they lower their prices, which may not lead to the recovery of initial costs of innovation or future marginal and fixed costs); Cotropia, *What Is the "Invention"?*, *supra* note 52, at 1894 ("Not needing to worry about competitors who might charge less for the same invention, the inventor can charge more than merely the cost of materials and time it takes to make each commercial embodiment of the invention. This additional money allows her to recover her sunk costs and turn a profit.").

⁵⁵ See, e.g., Jonathan M. Barnett, *Intellectual Property as a Law of Organization*, 84 S. CAL. L. REV. 785, 819 (2011) ("[P]atents act as the catalyst that can set off a typical observed sequence of progressive disintegration . . .").

⁵⁶ See *id.* at 819–20 (describing the "sequence of progressive disintegration").

⁵⁷ See *id.* at 798 ("As Arrow observed, the idea seller will decline to bargain with the idea buyer given the buyer's rational unwillingness to purchase an idea without disclosure.").

⁵⁸ See, e.g., Karen E. Sandrik, *Reframing Patent Remedies*, 67 U. MIAMI L. REV. 95, 108 (2012) ("[T]he Supreme Court explained that patents are property and that patent holders should accordingly in most instances be entitled to permanent injunctive relief.") (citing *Cont'l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 429–30 (1908)). Injunctive relief is available even for non-practicing patent

movers from copying or otherwise infringing the first-mover's invention. Nonetheless, infringers may still have other options.⁵⁹ Some scholars have theorized that the availability of injunctive relief creates the potential for "holdup" by patent-owners,⁶⁰ although there is yet to be published any empirical study confirming that "holdup" is a systemic problem in the innovation economy.⁶¹

Although patents serve as legal mechanisms aiding the commercialization of innovative technology, the design of the patent system places a kink in the pipeline from idea to marketable product. Specifically, patent law encourages early filing of patent applications.⁶² However, the pressure to file early means that inventors may file applications before knowing about a product's potential commercial success, let alone its final marketable configuration.⁶³ Thus, patents with early filed applications might never become commercialized,⁶⁴ or, if the

owners, see *Cont'l Paper Bag Co.*, 210 U.S. at 429, though the automatic availability of a permanent injunction has changed following the Supreme Court's decision in *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 390, 394 (2006).

⁵⁹ See, e.g., John M. Golden, *Injunctions as More (or Less) than "Off Switches": Patent-Infringement Injunctions' Scope*, 90 TEX. L. REV. 1399, 1418 (2012) ("Despite the issuance of an injunction, an adjudged infringer can continue to have a multiplicity of plausible options . . .").

⁶⁰ See, e.g., Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007) ("[T]he threat of injunction can enable a patent holder to negotiate royalties far in excess of the patent holder's true economic contribution.").

⁶¹ See, e.g., Alexander Galetovic et al., *Patent Holdup: Do Patent Holders Holdup Innovation?* 11–14 (Hoover IP² Working Paper Series, No. 14011, 2014), available at <http://media.hoover.org/sites/default/files/GaletovicHaberLevine%20Working%20Paper.pdf> (discussing "[t]estable implications of the patent holdup conjecture" and finding "neither *prima facie* evidence of holdup nor of the validity of the patent holdup conjecture"); Stephen Haber & Ross Levine, *The Myth of the Wicked Patent Troll*, WALL ST. J., June 30, 2014, at A11 (asserting that the increase in the number of patent lawsuits since 2000 may "reflect a healthy, dynamic economy").

The argument that there is a "holdup" problem caused by patent licensing companies is a central feature of the attacks on "patent trolls" today. See, e.g., Lemley & Shapiro, *supra* note 60, at 2010 (disagreeing with the Federal Circuit Court's assertion in *MercExchange, L.L.C. v. eBay, Inc.* that "additional leverage in licensing" is 'a natural consequence of the right to exclude and not an inappropriate reward' to a patentee") (quoting *MercExchange, L.L.C. v. eBay, Inc.*, 401 F.3d 1323, 1339 (Fed. Cir. 2005), *vacated and remanded*, 126 S. Ct. 1837 (2006)); Sandrik, *supra* note 58, at 97 ("[P]atent commentators are most concerned when NPEs strategically delay in agreeing to license their technology in hopes of demanding a royalty that not only reflects the value of the patented technology, but also a premium for holding out."). See generally Colleen V. Chien & Mark A. Lemley, *Patent Holdup, the ITC, and the Public Interest*, 98 CORNELL L. REV. 1, 24 (2012) ("Patent holdup tends to occur in complex, multicomponent products, particularly in information technology industries.").

⁶² See Christopher A. Cotropia, *The Folly of Early Filing in Patent Law*, 61 HASTINGS L.J. 65, 69–70 (2009) (noting that the U.S. patent system encourages early filing because it removes barriers to filing by not forcing actual reduction to practice and penalizes those who file later).

⁶³ Michael Abramowicz & John F. Duffy, *The Inducement Standard of Patentability*, 120 YALE L.J. 1590, 1661 (2011); Cotropia, *The Folly of Early Filing*, *supra* note 62, at 69; Sichelman, *supra* note 20, at 343.

⁶⁴ See Cotropia, *The Folly of Early Filing*, *supra* note 62, at 70 ("The earlier patents are filed, the more likely they go undeveloped."); Michael Risch, *Reinventing Usefulness*, 2010 BYU L. REV. 1195,

invention is commercialized, it may be delayed while the inventor waits for complementary technology, public adoption, and so on. The implementation of the America Invents Act⁶⁵ and its first-to-file provision has made this problem more acute.⁶⁶ Ultimately, though, the reward of a patent often compensates the best inventor rather than the best person or entity to merely commercialize the invention.⁶⁷ This is not a new phenomenon; history is replete with famous and prolific inventors who were better at creating than commercializing. Inventors such as Thomas Edison, Elias Howe, and Charles Goodyear each licensed his own technology to others for commercialization.⁶⁸ Considering the lengthy history of inventors who were unable or unsuccessful at commercializing their own technology, it would seem that the relationship between a licensing business model and commercialization would be well understood. However, the truth is that there is still much debate on this point.

C. Impact of the Patent Licensing Business Model on Commercialization

There are different views regarding the effect of the patent licensing business model on commercialization.⁶⁹ Much of the academic commentary is critical of the patent licensing business model, alleging that it increases transaction costs (including litigation costs), as well as leads to bad behavior, such as exploiting “submarine patents,” “royalty stacking,” and other high crimes and misdemeanors.⁷⁰ This Part will focus instead on

1212–13 (explaining how the timing of filing “can have significant effects on commercialization . . . [as s]ome inventions will never be useful, while others are simply not useful at the time of invention.”).

⁶⁵ Leahy-Smith America Invents Act, Pub. L. No. 112-29 § 3, 125 Stat. 284, 285 (2011) (amending 35 U.S.C. § 102(a) to reflect a first-to-file system).

⁶⁶ See Cotropia, *The Folly of Early Filing*, *supra* note 62, at 70 (“Filing early and often exacerbates many of the patent system’s most recognized problems.”).

⁶⁷ Sichelman, *supra* note 20, at 344.

⁶⁸ See, e.g., Naomi R. Lamoreaux et al., *Patent Alchemy: The Market for Technology in US History*, 87 BUS. HIST. REV., Spring 2013, at 3, 6 (discussing Edison’s use of assignments in order to “finance the early stages of his career”); Adam Mossoff, *The Rise and Fall of the First American Patent Thicket: The Sewing Machine War of the 1850s*, 53 ARIZ. L. REV. 165, 185 (2011) (discussing Howe’s use of advertisements in his legal battle against I.M. Singer & Co., “the last firm standing”). For a discussion of Goodyear, see CHARLES SLACK, NOBLE OBSESSION: CHARLES GOODYEAR, THOMAS HANCOCK, AND THE RACE TO UNLOCK THE GREATEST INDUSTRIAL SECRET OF THE NINETEENTH CENTURY 43 (2002) (“Goodyear’s conception of rubber was always romantic rather than commercial.”). He was, however, good at finding investors for his inventions. Goodyear did not just license his patents, but also litigated to enforce them. See Adam Mossoff, *Who Cares What Thomas Jefferson Thought About Patents? Reevaluating the Patent “Privilege” in Historical Context*, 92 CORNELL L. REV. 953, 991–94 nn.178, 188, 192, & 194 (2007) (citing to several of Goodyear’s cases).

⁶⁹ For a helpful discussion of both sides of the patent troll conversation, see Sannu K. Shrestha, Note, *Trolls or Market-Makers? An Empirical Analysis of Nonpracticing Entities*, 110 COLUM. L.REV. 114, 119–31 (2010).

⁷⁰ See, e.g., Bessen & Meurer, *supra* note 1, at 387, 399–402 (discussing the costs of non-practicing entity litigation to large and medium-sized firms, and the amount of money that is

the positive aspects of the licensing business model. The primary positive claim about the licensing business model is that, by exploiting efficiencies in the division of labor, these companies facilitate commercialization through match-making and market-making functions. As a result of “granting property entitlements,” patents have become a commodity in the market.⁷¹ Likewise, a legitimate market for patents exists because patents can be assigned, bought, and sold.⁷² This basic legal premise underscores the billions of dollars exchanged between market actors in the innovation economy in the creation and market distribution of innovative technology. While many of these untold numbers of business deals are unnoticed or unreported, the very large commercial transactions often make the news. For example, in an April 2012 bilateral deal, Microsoft purchased over nine hundred patents from AOL, which was followed by the subsequent sale of a portion of these patents to Facebook.⁷³ If the parties are not both big firms or are not well-established, repeat players in the innovation economy, it can be difficult for patent buyers and sellers to find each other.⁷⁴

Furthermore, if an individual inventor seeks to take advantage of the division of labor, which makes a complex commercial economy function so well, and thus monetize his patent via licensing with established firms that are experts in manufacturing or retail sales, the individual inventor may not possess a credible threat of litigation. The threat is often missing due to lack of resources to commence and sustain an infringement lawsuit

transferred to small inventors); Chien, *Of Trolls, Davids, Goliaths, and Kings*, *supra* note 28, at 1577, 1592 (discussing predatory lawsuits); Feldman & Ewing, *supra* note 20, at 20–21 (“Plagued by boundless uncertainty, insufficient information, and high transaction costs, the true patent system looks nothing like the idealized version.”); Lemley & Melamed, *supra* note 13, at 2173 (asserting that litigation follows when patent claims are not commensurate with actual inventions); Sichelman, *supra* note 20, at 384 (discussing inventor-commercializer transaction costs).

⁷¹ See McDonough, *supra* note 13, at 206 (explaining that “the only mechanism by which a patent owner may enforce his [property] entitlement is a civil lawsuit” and when “a credible threat of litigation exists, a patent becomes a commodity”); Mossoff, *Exclusion and Exclusive Use in Patent Law*, *supra* note 52, at 349–50 (explaining how the uniquely American legal definition of patent as property was essential to securing the reward to inventive labor via monetizing patented innovation in the marketplace).

⁷² See 35 U.S.C. § 261 (2012) (providing that, since patents are defined as “property,” the owners of patents “may in like manner grant and convey an exclusive right”); see also McDonough, *supra* note 13, at 207 (arguing that patents are commodities); Mossoff, *Exclusion and Exclusive Use in Patent Law*, *supra* note 52, at 322 (noting that the Supreme Court agrees that “patents are property insofar as patents secure a right to exclude”).

⁷³ Andrei Hagiu & David B. Yoffie, *The New Patent Intermediaries: Platforms, Defensive Aggregators, and Super-Aggregators*, 27 J. ECON. PERSP., Winter 2013, at 45 .

⁷⁴ *Id.*; see also Gregory Gorder, *Innovation and the Invention Gap: The Need for a New Invention Economy*, 21 GEO. MASON L. REV. 811, 822 (2014) (“As a market maker, an NPE can act as an intermediary between the large number of small, distributed portfolios of invention . . . and the manufacturing companies that need access to vast numbers of invention rights.”).

against larger corporations.⁷⁵ In these cases, companies that have specialized in the licensing business model can serve as key market intermediaries.⁷⁶ For example, they connect inventors who are unable or unwilling to commercialize their invention with willing and able commercializers.⁷⁷ As intermediaries, these companies have more knowledge and resources than individuals or small companies, who face significant disadvantages when trying to license or enforce their own patents.⁷⁸

Finally, as match-makers, patent licensing companies transfer resources to inventors, providing funds for new development activity.⁷⁹ For example, Intellectual Ventures claims it has provided \$500 million to individual inventors by obtaining rights to their inventions and then licensing this patented innovation to manufacturers and retailers.⁸⁰ Acacia

⁷⁵ See Ryan T. Holte, *Trolls or Great Inventors: Case Studies of Patent Assertion Entities*, 59 ST. LOUIS U. L.J. (forthcoming 2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2426444 (“Individuals face a significant disadvantage in high stakes patent litigation unless they allow PAEs to enforce their patents.”); McDonough, *supra* note 13, at 209–11 (arguing that individual inventors often lack the financial resources to pose a threat to large firms).

⁷⁶ See Gorder, *supra* note 74, at 122.

⁷⁷ See Daniel F. Spulber, *Intellectual Property and the Theory of the Firm*, in PERSPECTIVES ON COMMERCIALIZING INNOVATION 9, 31 (F. Scott Kieff & Troy A. Paredes eds. 2012) (“Specialized intermediaries began to create a market for patented technologies in the late 19th and early 20th century This important development ‘facilitated the emergence of a group of highly specialized and productive inventors by making it possible for them to transfer to others responsibility for developing and commercializing their inventions.’”) (citation omitted); Daniel A. Crane, *Intellectual Liability*, 88 TEX. L. REV. 253, 286–87 (2009) (“Troll defenders counter that trolls are socially useful intermediaries between small investors and commercialization. Small investors may not have the resources to engage in detecting infringers, licensing negotiations, or patent infringement lawsuits against infringers. By buying up patents from small inventors, trolls may ‘spur innovation by investing in undercapitalized projects and reducing transaction costs for small inventors who are routinely robbed by large corporations.’”) (citation omitted); 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, 832–35 (2014) (“Specialized intermediaries are especially valuable in new or emerging markets and in instances in which asymmetries of information and other transaction costs are significant.”); Edward Wyatt, *Inventive, at Least in Court*, N.Y. TIMES (July 16, 2013), www.nytimes.com/2013/07/17/business/ftc-turns-a-lens-on-abusers-of-the-patent-system.html (“Patent assertion companies say they provide many benefits for the technology industry and others, including a secondary market for patents that allows inventors to commercialize a product that they otherwise could not successfully market.”).

⁷⁸ See Schwartz & Kesan, *supra* note 1, at 428 (arguing that patent trolls take on the costs and risks of litigation that are too much for individual inventors and small companies to bear); see also McDonough, *supra* note 13, at 211; Penin, *supra* note 25, at 635.

⁷⁹ See, e.g., McDonough, *supra* note 13, at 190 (arguing that patent trolls benefit society by providing liquidity, market clearing, and increased efficiency to the patent markets); Schwartz & Kesan, *supra* note 1, at 428 (“Without the payment from an NPE, the inventors would receive no compensation whatsoever for their invention.”).

⁸⁰ *Fact Sheet*, *supra* note 35.

Intellectual Ventures is often classified as a patent troll. See, e.g., Lemley & Melamed, *supra* note 13, at 2119 (“The harshest criticism is reserved for companies like Intellectual Ventures, sometimes called a ‘super-troll’ or ‘troll aggregator,’ for gathering and asserting or licensing tens of thousands of

Research Corporation, another well-established company specializing in the licensing business model, provides inventors with fifty percent of the total royalties collected from its negotiated licenses.⁸¹

Beyond facilitating the reward for invention—one of the core functions of the patent system—as well as match-making, patent licensing companies also engage in the all-important function of *market-making* by adding liquidity to patents and reducing information asymmetries between buyers and sellers.⁸² Patents, as a general matter, are not easily converted into cash. The precise valuation of patented innovation can be extremely hard to determine.⁸³ Companies specializing in the licensing business model create a centralized market in which patents are bought when a seller is ready and sold when a buyer is ready. In short, the licensing business model creates a liquid market in a valuable commodity (a property right in innovation).⁸⁴ As a result, the licensing business model makes it possible to reduce information asymmetries among market actors and thus facilitate better and more efficient pricing of inputs throughout the entire production and distribution process. Patents, more so than other goods, are very difficult to evaluate, if only because they often represent property rights in innovative technology that has yet to be sold in the marketplace.⁸⁵ History is replete with predictions of failure in the evolution of new technologies from telephones to radios to computers, by individuals who were, in fact, experts.⁸⁶

Furthermore, patent transactions today often occur in a litigation-avoidance context, obscuring accurate valuation.⁸⁷ Patent licensing companies, by virtue of their full-time status as intermediaries and as repeat players in the market, are in a better position to evaluate patents.⁸⁸

patents.”). In addition to purchasing or licensing invention rights from individual inventors, Intellectual Ventures also has an active research facility. *Fact Sheet*, *supra* note 35.

⁸¹ See Nicole Shanahan, Comment, *Deconstructing the Patent Bubble: An Exploration of Patent Monetization Entities from Sewing Machine Combination to Rockstar Bid Co.*, 29 SANTA CLARA COMPUTER & HIGH TECH. L.J. 1, 17 (2013) (discussing testimony sent to FTC from Acacia). Although 50% may seem low, the same assets may garner no reward without Acacia’s acting as an intermediary. *Id.* at 18.

⁸² See, e.g., McDonough, *supra* note 13, at 190 (“Patent trolls provide liquidity, market clearing, and increased efficiency to the patent markets—the same benefits securities dealers supply capital markets.”).

⁸³ See *id.* at 213–14 (describing how patents are valued).

⁸⁴ *Id.*

⁸⁵ See Hagiu & Yoffie, *supra* note 73, at 46–47 (discussing how a lack of comparators makes valuing patents difficult).

⁸⁶ See David Pogue, *Use It Better: The Worst Tech Predictions of All Time*, SCI. AM. (Jan. 18, 2012), <http://www.scientificamerican.com/article/pogue-all-time-worst-tech-predictions/> (quoting several famous scientists whose predictions were later disproved).

⁸⁷ Hagiu & Yoffie, *supra* note 73, at 48.

⁸⁸ See *id.* at 62 (discussing the intermediary’s role with regard to the illiquidity and inefficiency of the patent market); see also McDonough, *supra* note 13, at 214–15 (discussing how patent dealers’

Because of their repeated presence in the market, they gain specialization and experience in assessing patent value that individual inventors and small companies are generally unable to obtain.⁸⁹ This decreases information asymmetries, enables more efficient transactions, and increases liquidity in the market for innovation. As a result, there is more invention and commercialization because of the incentives provided to inventors and the increased visibility of technological advances.⁹⁰

III. FORMERLY MANUFACTURING ENTITIES—CASE STUDIES

In today's debate about the patent system, it is often forgotten that there are reasons why legitimate companies would come into existence as a market intermediary, or why an existing, reputable company, such as IBM, would decide to better serve its shareholders by shifting its business model to one of solely or primarily licensing. Yet, similar to claims about "holdup," this is theorizing and lacks significant empirical verification beyond superficial anecdotal reports. This Part takes a step toward remedying this defect with respect to understanding the licensing business model by detailing several case studies of formerly manufacturing entities—companies that used to manufacture or sell patented innovation but then shifted their business models to licensing.

This Part first explains why the case study methodology is the appropriate vehicle to explore the effects of formerly manufacturing entities on commercialization. It then discusses case study narratives derived from researching the subject companies and interviewing, where possible, representatives from each company. This Part concludes with observations about what these formerly manufacturing entities have in common, as well as provides further illustrations from similarly situated companies that were not case study subjects.

A. *Why Utilize the Case Study Methodology*

Determining the effects of the licensing business model generally, and any patent licensing company in particular, on commercialization is challenging due to the sheer complexity of the question. These effects necessarily play out differently over time and across industries. Further, it is difficult to sort out determinative variables in the licensing business model from the myriad confounding variables that impact the innovation

experience with "risk pooling and equalized pricing" enables them to "better set a market clearing price for the patent").

⁸⁹ McDonough, *supra* note 13, at 214–15.

⁹⁰ *Id.* at 223.

economy, such as the economy generally, adoptions of industry standards or norms, and government regulation.⁹¹

There are limitations of a case study as well. A case study tends towards descriptive research and as such is not a rigorous scientific way to test a hypothesis.⁹² It is, however, a useful “jumping-off point for the study of new areas.”⁹³ A case study “steps back from the overwhelming web of data to pick up the thread of a single ‘case’ . . . [and] follow[s] the path of that one subject to see where it leads and attempt[s] to interpret its lessons.”⁹⁴ In social science literature, “case studies are the preferred method when (a) ‘how’ or ‘why’ questions are being posed, (b) the investigator has little control over events, and (c) the focus is on a contemporary phenomenon within a real-life context.”⁹⁵

These factors suggest that, for an initial assessment of the licensing business model, the case study methodology is the correct approach. Measuring the effect of patent licensing generally on commercialization would be a very useful question to study in depth; however, the amount of information, not to mention aspects, to pursue, is beyond the scope of this Article and is beyond the scope of research in this area more generally. For instance, many licenses—or at least the specific terms of these transactions—are not public information, and thus the quantifiable data necessary for a rigorous empirical study is unavailable.⁹⁶

Rather than advance any sort of quantifiable, empirical claim, this Article instead follows the path of a single “case”—a particular type of company pursuing the licensing business model—and sees where it leads. Here, it is the formerly manufacturing entity. The purpose is to examine how and why formerly manufacturing entities chose the licensing model and the effect this choice has had on commercialization of their patented innovation. While not producing a statistically significant result derived from a proper regression analysis, such case studies “offer a helpful reality check” on current theoretical claims⁹⁷ and, in this case, demonstrate that some of these claims may be wrong.

⁹¹ See Lea Shaver, *Illuminating Innovation: From Patent Racing to Patent War*, 69 WASH. & LEE L. REV. 1891, 1900 (2012) (using similar complexities to justify the case study methodology to examine innovation).

⁹² David L. Faigman, *To Have and Have Not: Assessing the Value of Social Science to the Law as Science and Policy*, 38 EMORY L.J. 1005, 1056 n.183 (1989).

⁹³ JULIAN L. SIMON, BASIC RESEARCH METHODS IN SOCIAL SCIENCES: THE ART OF EMPIRICAL INVESTIGATION 52 (2d ed. 1978) (“Descriptive research, often in the form of case studies, is usually the jumping-off point for the study of new areas in the social sciences.”).

⁹⁴ Shaver, *supra* note 91, at 1901–02.

⁹⁵ ROBERT K. YIN, CASE STUDY RESEARCH: DESIGN AND METHODS 2 (4th ed. 2009).

⁹⁶ Some scholars are finding innovative ways to address these information deficiencies. See, e.g., Galetovic et al., *supra* note 61, at 4 (using price decline as a proxy to assess holdup).

⁹⁷ Shaver, *supra* note 91, at 1903.

B. Case Study Narratives

For the case study, I examined four companies using the licensing business model at different stages of their business lives. The first two companies, Conversant and Sovereign Software, have been widely and publicly branded as “patent trolls.” The third, Immersion Technologies, has not been so labeled, but it could be given the similarities of its licensing business model to Conversant and Sovereign Software’s licensing business models. The last commercial entity, Rockstar, is not a typical formerly manufacturing entity because it was created when a manufacturing company (Nortel) went bankrupt and its patented innovation was purchased by a licensing company, which was itself created and funded by a consortium of manufacturing entities. These companies are also in the news: Conversant and Rockstar were mentioned in Intellectual Asset Management’s “IP personalities of 2013.”⁹⁸ Conversant, Sovereign Software, and Rockstar are all mentioned by prominent scholars on “patent trolls.”⁹⁹ All four of the subjects provide interesting and wide-ranging narratives about what it is to be a formerly manufacturing entity. The subjects also demonstrate the heterogeneity within one subcategory of the licensing business model.

1. Conversant Intellectual Property Management

Conversant IP Management, formerly known as MOSAID,¹⁰⁰ has been criticized widely by academics as a “patent troll.”¹⁰¹ Given its commercial evolution and its high profile, Conversant is probably an archetype of the category of formerly manufacturing entities.

Conversant’s predecessor, MOSAID, began as a semiconductor technology company in 1975—a company that invented and manufactured computer chips.¹⁰² Among the products it made were improved dynamic

⁹⁸ *They Made the Big IP News in a Very Busy Year . . .*, 64 INTELL. ASSET MGMT., Mar.–Apr. 2014, at 4.

⁹⁹ See Lemley & Melamed, *supra* note 13, at 2136 n.83 (discussing Conversant); *id.* at 2134 n.71 (discussing Sovereign); *id.* at 2138 (discussing Rockstar Bidco).

¹⁰⁰ MOSAID changed its name to Conversant Intellectual Property Management in September 2013 to “reflect [its] singular expertise in patent licensing and IP management,” according to President and CEO John Lindgren. Press Release, Conversant Intell. Prop. Mgmt., MOSAID Doubles in Size—and Becomes Conversant (Sept. 19, 2013), available at <http://www.conversantip.com/news-article/mosaids-doubles-in-size-and-becomes-conversant/>. For the sake of clarity, this Article will simply refer to the company as Conversant throughout.

¹⁰¹ See Chien, *From Arms Race to Marketplace*, *supra* note 12, at 328 (stating that MOSAID is a “company that has transitioned away from research and towards patent assertion” as its primary business); Robin Feldman, *Intellectual Property Wrongs*, 18 STAN. J.L. BUS. & FIN. 250, 306 n.185 (2013) (describing MOSAID as a “known patent troll”); Lemley & Melamed, *supra* note 13, at 2137 (describing MOSAID as a “former practicing entity turned troll”).

¹⁰² *History*, CONVERSANT INTELL. PROP. MGMT., <http://conversantip.com/about/history/> (last visited Sept. 1, 2014) [hereinafter *History*].

random access memory (DRAM) chips, as well as equipment for debugging prototype chips.¹⁰³ Through the years, the company continued to design and make memory chips, but it also sold chip designs to other companies to fabricate on their own.¹⁰⁴ In the mid-1990s, the company recognized that its chip designs were being used without its consent and thus it began a licensing program to help infringers become authorized licensees. At this time, the company was still researching and developing new technologies,¹⁰⁵ and thus its licenses covered only its own homegrown patented innovation. It granted its first license for its patented DRAM technology in 1999, and it continued to license only its own patented DRAM technology from 1999 to 2007.¹⁰⁶ In 2007, the company restructured to focus primarily on patent licensing, selling off its chip design and memory test manufacturing units.¹⁰⁷ In 2007 and 2009, MOSAID purchased patents covering similar technologies and added them to the patent portfolio that it licenses to manufacturers and other companies.¹⁰⁸

Since 2009, the company has expanded both its research and development (R&D) and licensing activities. On the R&D front, the firm has developed a new flash memory technology, which includes both patents and products.¹⁰⁹ On the licensing front, the company has acquired additional patents and currently holds a portfolio of over twelve thousand patents.¹¹⁰ Some of these patents cover technology developed by Conversant's own R&D department, while others were obtained through acquisitions or partnerships.¹¹¹ Conversant's licensing program has proven quite successful. The company claims it has "7 for 7" renewals, which means that all seven memory patent licensees re-signed license renewals for the same or higher rate upon or before expiration of the previous license.¹¹²

¹⁰³ *Id.*

¹⁰⁴ *History, supra* note 102; *Semiconductor Licensing—Driving Value*, MOSAID TECHS. 9 (Sept. 2013) [hereinafter *Semiconductor Licensing*], http://www.lesusacanada.org/docs/high-tech-sector/mosaid-semiconductor-licensing_les_shaer.pdf.

¹⁰⁵ *History, supra* note 102.

¹⁰⁶ *Semiconductor Licensing, supra* note 104.

¹⁰⁷ *Id.* at 10.

¹⁰⁸ *Id.*

¹⁰⁹ *History, supra* note 102; *see also Products*, HLNAND (2014), hlnand.com/site/ID/products (providing product briefs and data sheets on three chip types); *Company*, HLNAND (2014), <http://hlnand.com/site/ID/company> (providing data that HLNAND is developed by Conversant).

¹¹⁰ *Our Portfolio*, CONVERSANT, <http://conversantip.com/our-portfolio/> (last visited Aug. 31, 2014).

¹¹¹ *Id.*

¹¹² *Semiconductor Licensing—Driving Value*, MOSAID TECHS. (Sept. 2013), http://www.lesusacanada.org/docs/high-tech-sector/mosaid-semiconductor-licensing_les_shaer.pdf.

Conversant is frequently criticized by academics because it has amassed a large portfolio of patents covering wireless technology and because it endeavors to negotiate licenses surrounding this technology.¹¹³ Conversant, however, disagrees with its “patent troll” label. Conversant’s chief intellectual property officer, Scott Burt, distinguishes Conversant from the specious behaviors of some bad actors in the patent system. He claims that “[t]here are companies that are engaged in spurious lawsuits, seeking settlements that are less than the cost of litigation. But not us. We are a patent licensing company.”¹¹⁴

In addition to providing value through its own R&D, Conversant acts as a market intermediary by aiding the transfer of new technologies to firms that are in the best position to develop these technologies into new products and services.¹¹⁵ For example, in late 2009, Conversant learned of an Italian company that wanted to divest its international portfolio of more than two-hundred optical networking patents and pending applications.¹¹⁶ The Italian company was at the forefront of innovation in this technological sector, but was now in financial distress.¹¹⁷ Conversant acquired title to this patent portfolio and it even participated in prosecuting the remaining patent applications before the close of the deal.¹¹⁸ Conversant added approximately fifty new patents to the portfolio, and ultimately invested over one million dollars to strengthen the patent portfolio.¹¹⁹ A few years later, Conversant sold the patent portfolio it acquired from the Italian company to Google Inc.¹²⁰ Google planned to use this technology as it developed its high-speed Internet fiber network in

¹¹³ See, e.g., Jameson Berkow, *MOSAID Acquires 2,000 Nokia Patents*, FIN. POST (Sept. 1, 2011, 1:30 PM), http://business.financialpost.com/2011/09/01/mosaid-arms-for-wireless-patent-war-acquires-2000-nokia-patents/?_lsa=b5b5-39d6&__lsa=09c5-fa57 (discussing MOSAID’s acquisition of patents and Chief Executive John Lindgren’s statements about the company’s recent acquisitions); Matt Levy, *Dear IV: You’re Not a “Better” Kind of Patent Troll*, PATENT PROGRESS (Jan. 13, 2014), www.patentprogress.org/2014/01/13/dear-iv-youre-better-kind-patent-troll/ (disparaging Conversant’s business model because it is “based on forcing companies to pay for the right to continue doing what they’re already doing” and not “transferring technology to creat[ing] new products”).

¹¹⁴ Jason Mick, *FTC Will Probe “Patent Troll” Problem, But Won’t Sue Anyone*, DAILY TECH (June 20, 2013, 10:03 AM), <http://www.dailytech.com/FTC+Will+Probe+Patent+Troll+Problem+But+Wont+Sue+Anyone/article31799.htm>.

¹¹⁵ Jon Dudas & David Kline, *Patent Licensing: The Founding Fathers’ Secret for Economic Success*, CONVERSANT 2 (Sept. 2013), <http://www.conversantip.com/wp-content/uploads/Patent-Licensing-The-Founding-Fathers-Secret-for-Economic-Success.pdf>.

¹¹⁶ Abdul R. Zindani, *A New Vision for Patent Prosecution as Asset Managers: Optimizing the Value of Intellectual Property*, CONVERSANT 4 (Sept. 2013), <http://conversantip.com/wp-content/uploads/A-New-Vision-for-Patent-Prosecution.pdf>.

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ *Id.*

Kansas and Missouri.¹²¹ The technology is currently in use in Kansas City, as well as other areas around the country including Austin, Texas and Provo, Utah. Its use is expanding, as Google notes it is in early discussions with thirty-four cities in nine metro areas.¹²²

2. *Soverain Software*

Soverain Software represents another version of a formerly manufacturing entity. The Soverain Software story begins with a company called Open Market, Inc., an innovative tech firm that led the charge in 1993 into the e-commerce world on the then-new Internet.¹²³ Like Conversant, Soverain Software has been attacked for its licensing and enforcement activities with respect to the patented innovation it acquired from Open Market.¹²⁴

Open Market began in 1993 when the e-commerce industry was in its beginning stages.¹²⁵ Previous uses of the Internet had largely been limited to academic research and to military defense work.¹²⁶ Inventors at Open Market recognized the potential for e-commerce, as well as the need for new technology to open up the Internet for shopping.¹²⁷ The inventors raced against many other companies, coding for more than twenty hours per day and sleeping at the office.¹²⁸ The hard work paid off. Open Market won the race to create software to support the emerging new e-commerce industry.¹²⁹ With the technology developed, the company filed for patents (including a copy of the source code) in October 1994.¹³⁰ In 1996, the company went public.¹³¹ From 1996 through 2000, Open Market's product, Transact, was a leader in the e-commerce field, holding the majority of the

¹²¹ Jim O'Neill, *Will Italian Cable Company's Patents Help Google Wire Its 1-Gig Network in Kansas City?*, FIERCE CABLE (Mar. 6, 2012), www.fiercecable.com/story/will-italian-cable-companys-patents-help-google-wire-its-1-gig-network-kans/2012-03-06.

¹²² James O'Toole, *People in Overland Park, Kansas, May Soon Have 100 Times Faster Internet Than You*, CNN MONEY (July 8, 2014, 2:16 PM), http://money.cnn.com/2014/07/08/technology/innovation/google-fiber-overland-park/index.html?hpt=hp_t2; <https://fiber.google.com/newcities/>

¹²³ *Legacy*, SOVERAIN, http://www.soverain.com/asp/about/about_legacy.asp (last visited August 31, 2014).

¹²⁴ See Chloe Albanesius, *Newegg Crushes Patent Troll in Online "Shopping Cart" Suit*, PC MAG. (Jan. 28, 2013, 4:24 PM), <http://www.pcmag.com/article2/0,2817,2414778,00.asp> (characterizing Soverain as a patent troll and criticizing its lawsuits against Newegg and others for infringing on its e-commerce technology, which was originally created by Open Market).

¹²⁵ *Legacy*, *supra* note 123.

¹²⁶ Timothy B. Lee, *Everything You Need to Know About the Internet*, VOX (Jun. 16, 2014, 4:55 PM), <http://www.vox.com/cards/the-internet/who-created-the-internet>.

¹²⁷ See interview with Katharine Wolanyk, President, Soverain Software (Dec. 6, 2013) (on file with author).

¹²⁸ See *id.*

¹²⁹ *Id.*

¹³⁰ *Noteworthy Patents*, SOVERAIN, http://www.soverain.com/asp/intellectual/intellectual_patents.asp (last visited Sept. 24, 2014).

¹³¹ *Legacy*, *supra* note 123.

global market.¹³² When the patents issued in 1998, Open Market was hailed as a great success story.¹³³ At that time, however, software patents were not aggressively enforced due to concerns that licensing efforts would offend large tech companies.¹³⁴

As the 2000s approached, these larger tech companies entered the e-commerce technology field and then the dot.com bubble burst.¹³⁵ As a result, Open Market went through some restructuring and was purchased by Divine, Inc. in 2001.¹³⁶ In 2003, Transact was acquired by Soverain Software.¹³⁷ Soverain Software not only purchased the patents from the original Open Market inventors and innovators, but many of these original employees remain at Soverain.¹³⁸ Further, Soverain Software is possibly mislabeled as a “formerly manufacturing entity,” as it continues to offer Open Market’s Transact product for e-commerce business, as well as support, training, and consulting for the product.¹³⁹ Soverain’s customers range from mid-market to blue chip companies.¹⁴⁰

Recently, Soverain Software has found itself squarely in the sights of the critics of “patent trolls.”¹⁴¹ In fact, Representative Bob Goodlatte, when introducing H.R. 3309 (later called the Innovation Act of 2013¹⁴²), criticized “abusive patent suits” that “claim ownership over basic ideas”

¹³² *Id.*

¹³³ See Nick Wingfield, *Three Patents Lift Open Market as Observers Guess Their Worth*, WALL ST. J., Mar. 4, 1998 (reporting that one analyst stated: “The most important thing is that it will allow them to be acknowledged as a leader and be sought after for strategic relationships”).

¹³⁴ See Jon G. Auerbach, *Open Market Inc. Says It Will Receive Patents for Internet-Commerce Software*, WALL ST. J., Mar. 3, 1998, at B6 (“But an aggressive patent play also risks angering competitors, many of which have even larger patent portfolios.”).

¹³⁵ See Editorial, *The Dot-Com Bubble Bursts*, N.Y. TIMES, Dec. 24, 2000, at WK8 (describing the aftermath of the dot-com bubble bursting).

¹³⁶ *Legacy*, *supra* note 123.

¹³⁷ *Id.*

¹³⁸ See, e.g., Gene Quinn, *Who Is a Patent Troll?*, IP WATCHDOG (Jan. 7, 2014, 4:42 PM), <http://www.ipwatchdog.com/2014/01/07/who-is-a-patent-troll/id=47268/> (“[T]hey acquired patents to facilitate their business plans and continue to be an operating company that services the products covered by the software patents they now own and enforce.”); Interview with Katharine Wolanyk, *supra* note 127.

¹³⁹ *Products*, SOVERAIN, <http://www.soverain.com/asp/products/> (last visited Sept. 1, 2014); *Services*, SOVERAIN, <http://www.soverain.com/asp/services/> (last visited Sept. 1, 2014).

¹⁴⁰ *Customers*, SOVERAIN, http://www.soverain.com/asp/about/about_customers.asp (last visited Aug. 25, 2014).

¹⁴¹ E.g., Roy Schestowitz, *Soverain Software Is a Patent Troll*, TECHRIGHTS (Jan. 29, 2013, 5:17 PM), <http://techrights.org/2013/01/29/soverain-software/>; see, e.g., Joe Mullin, *How Newegg Crushed the “Shopping Cart” Patent and Saved Online Retail*, ARS TECHNICA (Jan. 27, 2013, 4:00 PM), <http://arstechnica.com/tech-policy/2013/01/how-newegg-crushed-the-shopping-cart-patent-and-saved-online-retail/> (accusing Soverain of being a sham company in the business of filing patent lawsuits against e-commerce companies).

¹⁴² Innovation Act, H.R. 3309, 113th Cong. (2013), available at <http://www.gpo.gov/fdsys/pkg/BILLS-113hr3309ih/pdf/BILLS-113hr3309ih.pdf>.

such as “using a shopping cart on your website.”¹⁴³ Although Representative Goodlatte did not explicitly name Sovereign Software in his remarks, it was clear to everyone in the innovation industries and to the stakeholders lobbying for the legislation exactly which company he was referring to—Sovereign Software was engaged at that time in a high-profile patent infringement lawsuit with NewEgg about, among other things, shopping cart technology.¹⁴⁴

Today, Sovereign Software is fighting on multiple fronts—trying to fend off the “patent troll” label that has been attached to it in the public mind, continuing its dual-revenue streams of licensing and selling and servicing the Transact product, and defending against repeated attacks on its patents in the courts and in the administrative post-grant review programs at the Patent and Trademark Office.¹⁴⁵

3. *Immersion Corporation*

Unlike Conversant and Sovereign Software, Immersion Corporation has generally avoided being attacked as a “patent troll.” However, given that it has a patent licensing business model,¹⁴⁶ it may be only a matter of time before this occurs. It shares many of the same characteristics of other formerly manufacturing entities that have been so labeled. Specifically, even before moving to a primarily licensing business model, Immersion was described as “enthusiastic” in enforcing its patents on haptic feedback technology.¹⁴⁷

¹⁴³ Bob Goodlatte, Chairman, U.S. H.R. Judiciary Comm., Keynote Address at the American Enterprise Institute: Innovators Versus Litigators: Chairman Bob Goodlatte on the Need for Patent Reform (Oct. 24, 2013), available at www.aei.org/files/2013/10/25/-goodlatte-transcript_165337889129.pdf (internal citation omitted).

¹⁴⁴ Gary Shapiro, *Beware the Patent Trolls: Innovators Need Protection from Legal Leeches*, WASH. TIMES (Apr. 16, 2013), www.washingtontimes.com/new/2013/apr/16/beware-the-patent-trolls/; see Katharine Wolanyk, *Published Letter to Chairman Goodlatte*, SOVERAIN (Nov. 18, 2013), www.sovereign.com/pdf/Letter_to_Chairman_Goodlatte.pdf (responding to statements about Sovereign’s business and patents made by U.S. House Judiciary Committee Chairman Bob Goodlatte).

¹⁴⁵ See interview with Katharine Wolanyk, *supra* note 127.

Sovereign Software recently suffered a blow when the Supreme Court denied certiorari in its appeal from the United States Court of Appeals for the Federal Circuit, which held multiple patents to be invalid, despite surviving previous reexaminations at the United States Patent and Trademark Office. *Sovereign Software LLC v. Newegg*, 134 S. Ct. 910, 910 (2014).

¹⁴⁶ See *Immersion Corporation Reports Record Revenues in First Quarter 2013*, BUSINESS WIRE (May 2, 2013, 4:15 PM), www.businesswire.com/news/home/20130502006276/en/Immersion-Corporation-Reports-Record-Revenues-Quarter-2013#_U_zel7ywl10 (attributing Immersion’s record revenues in 2013 to the scalability of their licensing business model).

¹⁴⁷ See Jon Fingas, *Google Settles Patent Lawsuit from Immersion over Motorola Use of Haptic Feedback*, ENGADGET (Nov. 27, 2012), <http://www.engadget.com/2012/11/27/google-settles-patent-lawsuit-from-immersion-over-motorola-haptics/> (“Immersion is known for guarding its haptic feedback patents with enthusiasm . . .”).

Immersion was founded in 1993 and is currently the leading innovator in haptic technology.¹⁴⁸ Haptic technology provides tactile feedback, such as the “rumble effect” in game controllers and “touch vibration” in smartphone dial pads.¹⁴⁹ The technology has a number of other applications, including being used in the automobile and medical industries.¹⁵⁰ In 2002, Immersion sued Microsoft and Sony, alleging infringement of the haptic technology in the Xbox and PlayStation game controllers.¹⁵¹ In 2003, Microsoft settled with Immersion, paying a \$26 million licensing fee and receiving a stake in the company.¹⁵² Sony did not settle at this time, opting instead to take the dispute to court. Sony lost, and was ordered to pay Immersion \$82 million in damages.¹⁵³ Sony appealed and lost again, and decided at that point to remove the haptic technology from the PlayStation 3 controller.¹⁵⁴

In 2010, Immersion sold off a less-than-successful simulation equipment business and adopted a pure licensing business model, holding at that time more than eight hundred patents.¹⁵⁵ The company now owns over twelve hundred issued or pending patents.¹⁵⁶ Even when it was manufacturing products based on its patented technologies, Immersion was not shy about enforcing its patents against infringers.¹⁵⁷ Such patent infringement lawsuits may continue; only now, the company bringing the

¹⁴⁸ *Leading Innovator in Haptics Technology*, IMMERSION, <http://immersion.com/about/company-overview/index.html> (last visited Aug. 25, 2014).

¹⁴⁹ *Haptics Is Quite Literally The Science of Touch.*, IMMERSION, <http://www.immersion.com/haptics-technology/what-is-haptics/index.html> (last visited Aug. 25, 2014).

¹⁵⁰ *What Products Use Haptics?*, IMMERSION, <http://www.immersion.com/haptics-technology/haptics-in-use/index.html> (last visited Aug. 25, 2014); see also *Licensees*, IMMERSION, <http://www.immersion.com/haptics-technology/licensees/index.html> (last visited Aug. 25, 2014) (listing the mobile device market and medical market as market segments in which Immersion licenses its haptic technology, and providing a list of licensees, including LG Electronics, Microsoft, Sony, and Volkswagen).

¹⁵¹ Press Release, Immersion Corp., *Immersion Files Suit Against Microsoft and Sony Computer Entertainment for Patent Infringement* (Feb. 11, 2002), available at <http://immr.client.shareholder.com/releasedetail.cfm?ReleaseID=111788>.

¹⁵² Stephen Shankland, *Microsoft Settles Suit with Immersion*, CNET NEWS (Jul. 28, 2003, 6:34 PM), http://news.cnet.com/Microsoft-settles-suit-with-Immersion/2100-1041_3-5056455.html.

¹⁵³ Jeremy Reimer, *Sony Settles Legal Rumble with Immersion*, ARS TECHNICA (Mar. 2, 2007, 9:06 AM), <http://arstechnica.com/business/2007/03/8963/>.

¹⁵⁴ *Id.*

¹⁵⁵ Dean Takahashi, *Immersion Sees Wave of Touch-Feedback Smartphones Coming*, VENTUREBEAT (Apr. 29, 2010, 7:00 AM), <http://venturebeat.com/2010/04/29/immersion-sees-wave-of-touch-feedback-smartphones-coming/>.

¹⁵⁶ *Leading Innovator in Haptics Technology*, *supra* note 148.

¹⁵⁷ See, e.g., Press Release, Immersion Corp., *Immersion Files Suit Against Microsoft and Sony Computer Entertainment for Patent Infringement* (Feb. 11, 2002), available at <http://immr.client.shareholder.com/releasedetail.cfm?ReleaseID=111788> (discussing Immersion’s patent infringement lawsuit against Microsoft Corporation, Sony Computer Entertainment, Inc., and Sony Computer Entertainment of America for infringement by Microsoft and Sony’s use of haptic technology in their video gaming consoles).

lawsuit will likely be labeled with the pejorative moniker—"patent troll." The licensing business model also means that Immersion now has additional resources at its disposal to develop and refine its haptics technology. Such ongoing R&D efforts, supported by its licensing revenue, are important as the number of industries that use haptics technology in their products continues to grow.

4. *Rockstar Consortium*

The last case study presents a unique perspective on the formerly manufacturing entity tale, because it is an entirely different commercial scenario from that represented by Conversant, Sovereign Software, or Immersion. This case study answers the all-important question: What happens when a formerly manufacturing entity can no longer remain in business under any business model? One option is to divest its assets to a company practicing the licensing business model. Another option is to divest its assets to another manufacturer.

In 2011, Nortel Networks was bankrupt and seeking a way to monetize its remaining assets.¹⁵⁸ The bankruptcy court in charge of winding down Nortel's commercial activities and distributing its assets to Nortel's creditors hosted a public auction of its large patent portfolio.¹⁵⁹ Google opened bidding for Nortel's portfolio at \$900 million.¹⁶⁰ In response, Microsoft, Apple, Research in Motion (now Blackberry), Sony, and other leading mobile technology companies formed a new legal entity called Rockstar Bidco, which began bidding for Nortel's patents.¹⁶¹ A bidding war between Google and Rockstar began.¹⁶² By the end, Rockstar outbid Google by \$100 million and thus purchased approximately six thousand patents covering communication technologies for the price of \$4.5 billion.¹⁶³ Approximately two thousand of these patents were dispersed to

¹⁵⁸ Joe Mullin, *Patent War Goes Nuclear: Microsoft, Apple-Owned "Rockstar" Sues Google*, ARS TECHNICA (Oct. 31, 2013, 11:10 PM), <http://arstechnica.com/tech-policy/2013/10/patent-war-goes-nuclear-microsoft-apple-owned-rockstar-sues-google/>; see also Thomas H. Chia, *Fighting the Smartphone Patent War with Rand-Encumbered Patents*, 27 BERKELEY TECH. L.J. 209, 213 (2012) (describing the auction bid for Nortel's assets in 2011).

¹⁵⁹ Peg Brickley, *Corp. News: Nortel Gets Court Nod for Auction of Patents*, WALL ST. J., May 2, 2011, at B5.

¹⁶⁰ Amir Efrati & Stuart Weinberg, *Google Seeks Nortel Patents in Defensive Move, Search Giant Makes \$900 Million 'Stalking Horse' Bid*, WALL ST. J., April 5, 2011, at B11.

¹⁶¹ See Chia, *supra* note 158, at 213 ("In July 2011, Apple, Microsoft, RIM, Sony, Ericsson, and EMC formed an alliance to outbid Google and Intel for more than 6,000 patent assets from Nortel Networks by placing the winning bid at \$4.5 billion."); Lemley & Melamed, *supra* note 13, at 2138 ("Microsoft, Apple, and others formed a joint venture, called 'Rockstar Bidco,' both to acquire new patent rights in smartphone technology and to establish a new entity that could assert those patents against others.").

¹⁶² Robert McMillan, *How Apple and Microsoft Armed 4,000 Patent Warheads*, WIRED (May 21, 2012, 6:30 AM), <http://www.wired.com/wiredenterprise/2012/05/rockstar/>.

¹⁶³ *Id.*

members of the consortium, such as Apple and Microsoft.¹⁶⁴ The remaining four thousand or so patents were transferred to Rockstar Consortium, a patent licensing company.¹⁶⁵ Recently, Rockstar Consortium sued Google for patent infringement, and Google has counter-sued Rockstar, alleging that the patents are invalid.¹⁶⁶

The difference between a bankrupt company's assets being transferred to a patent licensing company and the same assets being transferred to a consortium like Rockstar, comprised of manufacturing companies, is that there is more to the story than the patent infringement lawsuit. One article asserts that Rockstar "was pretty unapologetic about embracing the 'patent troll' business model," but the article also states that twenty-five of Rockstar's thirty-two employees were previously employed by Nortel.¹⁶⁷ Additionally, some critics of the patent licensing business model are a bit tepid in their reaction to Rockstar's patent infringement lawsuit against Google—after all, the companies behind Rockstar are manufacturers. Moreover, some of the companies, like Apple, are directly responsible for the R&D that created the smartphone revolution.¹⁶⁸ These same companies have also been critical of patent licensing companies that have sued them, even employing the same "patent troll" rhetoric first coined by Intel attorney Peter Detkin more than a decade ago.¹⁶⁹ But their creation of Rockstar, and their ongoing sales of patents to other patent licensing companies,¹⁷⁰ makes clear that there are often no clear-cut heroes or villains in these disputes.

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ Joe Mullin, *Google Files Counter-Suit against Rockstar, Seeking to Avoid East Texas*, ARS TECHNICA (Dec. 26, 2013, 9:15 PM), <http://arstechnica.com/tech-policy/2013/12/google-files-counter-suit-against-rockstar-seeking-to-avoid-east-texas/>. Although this is a standard maneuver in defending a patent infringement lawsuit, it is interesting that Google was willing to pay \$900 million for invalid patents.

¹⁶⁷ Joe Mullin, *Patent War Goes Nuclear: Microsoft, Apple-Owned "Rockstar" Sues Google*, ARS TECHNICA (Oct. 31, 2013, 11:10 PM), <http://arstechnica.com/tech-policy/2013/10/patent-war-goes-nuclear-microsoft-apple-owned-rockstar-sues-google/>.

¹⁶⁸ See, e.g., Bryan Chaffin, *Apple and Microsoft-Owned Rockstar Muddies 'Patent Troll' Waters with Google Suit*, THE MAC OBSERVER (Nov. 1, 2013, 9:54 PM), <http://www.macobserver.com/tmo/article/apple-and-microsoft-owned-rockstar-muddies-patent-troll-waters-with-google> (explaining that although Rockstar is a non-practicing entity, it is owned by practicing entities, such as Apple, whose innovations with iOS provided the foundation for Android's success).

¹⁶⁹ See, e.g., Glenn G. Lammi, *No Name Calling In My Court: Judge Bans Use Of Term "Patent Troll" In Jury Trial*, FORBES (June 30, 2014, 10:00 AM), <http://www.forbes.com/sites/wlf/2014/06/30/no-name-calling-in-my-court-judge-bans-use-of-term-patent-troll-in-jury-trial/> (reporting how Judge Koh prohibited Apple from referring to the plaintiff as a "patent troll" in the patent infringement trial).

¹⁷⁰ See, e.g., Tam Habert, *The Troubled Life of Patent No. 6,456,841: Tracing the Tortured Legal Trail of a Simple Smartphone Patent*, IEEE SPECTRUM (April 29, 2013, 6:00 PM), <http://spectrum.ieee.org/at-work/innovation/the-troubled-life-of-patent-no-6456841> (describing a patent sold by Apple to a licensing company, which then sued numerous high-tech companies—not including Apple—for patent infringement).

Today, the companies behind Rockstar have access to a potential revenue stream as well as cross-licensing or defensive capabilities, both of which can result in increased innovation and commercialization by these companies.¹⁷¹ Further, having access to this large patent portfolio covering most aspects of telecommunications technology allows these firms to develop products without the overhead of a high level of clearance, giving them freedom and resources to enter new areas of development and new markets.¹⁷²

C. *Common Characteristics of Formerly Manufacturing Entities*

These case studies explore one class of patent licensing entity—companies that used to manufacture or sell products or services in the marketplace but then shifted to a licensing business model. Although there are only four subjects in the case study, the class of formerly manufacturing entities is likely larger than many may initially believe. Thus, the four subject companies described above are not outliers or unusual cases. One study found that only 21.5% of patents asserted by patent licensing entities were issued to patent licensing companies at the time the patents were first obtained. The remaining 78.5% of patent owners in the study either had, or attempted, to first produce or sell something with the technology.¹⁷³ In addition to the manufacturing companies who sell patents to licensing entities, such as Apple,¹⁷⁴ this 78.5% includes the class of formerly manufacturing entities.

Further, many of the most notable patent licensing entities actually fall into the category of formerly manufacturing entities. This includes Conversant, as described above, and others not in these case studies, such as the (in)famous NTP, Inc.¹⁷⁵ NTP was probably the first company widely

¹⁷¹ See, e.g., Florian Mueller, *Cisco Might Have Had a Greater Benefit from Joining Rockstar than Cross-licensing with Google*, FOSS PATENTS (Feb. 5, 2014), <http://www.fosspatents.com/2014/02/cisco-might-have-had-greater-benefit.html> (analyzing the benefits available to Rockstar consortium members).

¹⁷² *Id.*

¹⁷³ Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 486 (2012). Risch also studied whether patent trolls obtained patents during “fire sales” by failing companies; his data indicated they did not; although companies may license their patents under distress, even if they do not ultimately fail. *Id.* at 489–90.

¹⁷⁴ See Habert, *supra* note 170 and accompanying text (discussing Apple’s patent sales).

¹⁷⁵ See *Decrease Your Exposure to Patent Trolls*, FILAMENT, <http://www.filament.com.au/ip-intelligence/patent-troll.aspx> (last visited Sept. 23, 2014) (describing how NTP, Inc. sued Research in Motion for BlackBerry email patents, yet Research in Motion actually made the BlackBerry, suggesting that NTP, Inc. is a patent troll). Other notable patent licensing entities that began as manufacturing entities, in addition to those in the case studies, include Tessera, Wi-LAN, and Rambus, all of which have appeared on Patent Freedom’s largest patent licensing company list. See *Largest Patent Holdings*, PATENT FREEDOM (July 14, 2014), <https://www.patentfreedom.com/about-npes/holdings/>. The category of formerly manufacturing entity also includes Opti, Inc. See *Opti Inc. Company Description*, BUSINESS WEEK (Aug. 21, 2014, 8:10 PM), <http://investing.businessweek.com/research>

attacked as a “patent troll” when it sued Research in Motion in 2001 for infringing NTP’s patents covering wireless telecommunications technology.¹⁷⁶ Many people, however, do not realize that NTP became a patent licensing entity only after repeatedly failing to succeed at manufacturing and selling its patented technology.¹⁷⁷ Other patent licensing entities that fall within the formerly manufacturing entity category include firms that are still practicing—like Soverain Software, as described above—but have devoted a significant portion of their business model to licensing.¹⁷⁸ For example, InterDigital was named one of “Tech’s 8 Most Fearsome Patent Trolls” in 2012 by *Business Insider*,¹⁷⁹ but InterDigital was publicly lauded the following year as a company likely to succeed in the white-space network area based on the dynamic spectrum management systems its *own researchers* had invented.¹⁸⁰ As noted earlier, even Intellectual Ventures employs hundreds of inventors and researchers in creating its own innovative technology.¹⁸¹

At some point, each of these companies recognized the commercial reality that continuing to operate solely as a manufacturing business would not be viable because they would fail and go bankrupt.¹⁸² Some formerly manufacturing entities were in the manufacturing business for many years, if not decades, before adopting a licensing business model, such as IBM.¹⁸³ Others, such as NTP, attempted to enter the market as a manufacturer, retailer, or both, but were met with failure or some other impediment to participating in this particular business model. Reasons why a company may have changed its business model include, among many others: foreign competition, disaggregation of the supply chain, changes in technological

/stocks/snapshot/snapshot_article.asp?ticker=OPTI (describing Opti Inc.’s history as a former manufacturing entity).

¹⁷⁶ NTP, Inc. v. Research in Motion, Ltd., 392 F.3d 1336, 1343 (Fed. Cir. 2004), *opinion withdrawn and superseded on reh’g in part*, 418 F.3d 1282 (Fed. Cir. 2005).

¹⁷⁷ Barrie McKenna et al., *Patently Absurd: The Inside Story of RIM’s Wireless War*, GLOBE & MAIL, Jan. 28, 2006, at B4 (showing that NTP’s founder, Thomas Campana, Jr., made numerous unsuccessful attempts to commercialize the invention himself before changing to a patent licensing business model).

¹⁷⁸ See *supra* Part III.B.2 (discussing Soverain’s business model).

¹⁷⁹ Erin Fuchs, *Tech’s 8 Most Fearsome ‘Patent Trolls’*, BUS. INSIDER (Nov. 25, 2012, 2:01 PM), <http://www.businessinsider.com/biggest-patent-holding-companies-2012-11?op=1>.

¹⁸⁰ See Kate Voss, *‘White Space’ Networks are Coming—Who Will Win, Who Will Lose?*, VENTUREBEAT (Oct. 24, 2013, 11:00 AM), <http://venturebeat.com/2013/10/24/white-space-networks-are-coming-who-will-win-who-will-lose/> (praising InterDigital’s work developing “dynamic spectrum management systems”).

¹⁸¹ See *Fact Sheet*, *supra* note 35.

¹⁸² See, e.g., Kirkpatrick, *supra* note 14 (reporting how Lou Gerstner, when he became CEO at IBM in 1993, “took a dispirited, directionless, money-losing collection of businesses and utterly transformed it” by making it “service-driven”).

¹⁸³ See Hosteny, *supra* note 33.

standards or preferences, and extraordinary amounts of unchecked infringement by others in the market.

Based on the case studies presented above, there are at least three common characteristics of formerly manufacturing entities (and other similarly situated patent licensing entities). First, each of these companies had previously created and then manufactured or sold technological products and services in the marketplace. In fact, many formerly manufacturing entities still do, except that it is no longer their primary source of revenue. Second, since each company was once a manufacturer or retailer, it is a repeat player in the marketplace and thus does not engage in the type of deceptive practices rightly complained about by some bad actors in the patent system.¹⁸⁴ Third, each of these companies continues in some way to develop new technology, to support previously developed technology, or to do both. In sum, these patent licensing companies are still active participants in the innovation industries in which they live and thrive. They reflect the efficiencies achieved in all markets through the division of labor, and thus their licensing revenue creates added value for additional invention, innovation, and customer support.

In conclusion, through their earlier manufacturing or retail business models, companies in the formerly manufacturing entity category gained valuable knowledge about the nature, value, and commercialization of patented innovation. They are repeat players in the innovation economy, not fly-by-night operators who own only one or two possibly suspect patents, and thus they follow the social and commercial norms that are internalized by legitimate commercial firms. These characteristics suggest that formerly manufacturing entities uniquely have positive effects on core patent policies: incentivizing invention and commercialization—a very important insight that is buried underneath the unclear and inflammatory “patent troll” rhetoric. This is even more important when we remember that formerly manufacturing entities make up a substantial number, if not the overwhelming majority, of patent licensing entities today.

IV. IMPLICATIONS AND LESSONS FOR PATENT POLICY

The characteristics of formerly manufacturing entities gleaned from the case studies help to explain some of the effects of this particular patent licensing entity on commercialization, and perhaps the impact of the licensing business model more broadly. Although one must be careful not

¹⁸⁴ See, e.g., Ashby Jones, *Corporate News: New York Cracks Down on Patent Trolls*, WALL ST. J., Jan. 14, 2014, at B3 (reporting how a patent troll used deceptive tactics, such as sending “more than 1,000 letters” accusing New York businesses of infringing on its patents, sending “demand letters from 100 different subsidiary companies . . . [and requiring] its targets to sign nondisclosure agreements before it would tell them basic information about the patents at issue. The troll also habitually included false claims within the letters”).

to draw conclusions that are too strong from case studies, it does not mean that they are meaningless. To the contrary, they are helpful starting points for identifying important aspects of both patented innovation and the innovation economy that may have been neglected or ignored in recent scholarship. This Part identifies these issues and highlights some initial insights, such as the meaning of commercialization within patent policy and how formerly manufacturing entities may have a positive role in commercializing new innovation. This poses challenges to assumptions made about these companies under the unclear “patent troll” rhetoric which, at a minimum, fails to properly distinguish the *licensing business model* from the bad actors bringing nuisance lawsuits.

A. Redefining “Commercialization”

The first implication of these case studies is that many patent scholars use a far too narrow or crabbed definition of “commercialization.” The term “commercialization” might seem simple: it is the act of bringing new products or services to market. Yet, as this term has been used in the patent policy debates in recent years, it has been employed in a far more restrictive sense. To the critics of the patent licensing business model, individuals or companies that manufacture and sell their own products or services are deemed to be the only proper “commercializers” of patented innovation; the market intermediaries that are a universal feature in every aspect of a flourishing commercial economy are instead vilified as somehow preventing or inhibiting commercialization.

The case studies presented in this Article challenge this unchecked and incorrect assumption among scholars and commentators, which has been driving the current patent policy debates. The property rights represented in a patent, like all property rights, are meant to facilitate private ordering in the use and disposition of the legally protected asset, which necessarily includes the choice of business model.¹⁸⁵ Some business models may include manufacturing or selling the patented technology, but other equally legitimate and economically important business models include licensing rights to patented technology or even selling outright the patents

¹⁸⁵ See Spulber, *supra* note 77, at 10 (“IP rights influence entrepreneurial activity because they affect the innovators choice between entrepreneurship and technology transfer in the market for ideas”); see also Adam Mossoff, *A Simple Conveyance Rule for Complex Innovation*, 44 TULSA L. REV. 707, 714–15 (2009) (“On the basis of this conceptual linkage between property in land and in inventions, nineteenth-century American courts developed the same default rule for patent conveyances as had been employed for real property. . . . Patentees were able to impose a whole litany of restrictions on the use of the property interest they conveyed to a licensee. For instance, a patentee could restrict a licensee in terms of the total quantity of patented products manufactured or sold, the manner in which the patented product may be used, the territorial scope in which the patented product may be used or sold, and even the price that the licensee could charge in the marketplace.”).

themselves.¹⁸⁶ As has been long recognized by economists, the licensing business model allows for the advantages of specialization and upstream or downstream economies of scale, leading to many economic efficiencies.¹⁸⁷ Despite the recent concerns about the patent licensing business model, this business model has existed for a very long time and has proven quite successful.¹⁸⁸

History alone is not sufficient to justify, as a policy matter, the licensing business model. However, the validity of the licensing business model is further supported by the underlying policies in the American patent system. The four incentive-based policy justifications for the patent system include: the incentive to invent, the incentive to disclose, the incentive to design around, and the incentive to commercialize.¹⁸⁹ The licensing business model is justified by all four of these fundamental patent policies.

First, consider the incentive to invent or to generate a novel idea. The patent grant allows the inventor to obtain monopoly pricing as a reward; through this, the inventor may recoup development costs for the new technology as well as obtain resources for further new invention.¹⁹⁰ But, an invention in a garage or R&D lab is not the same thing as the technological product or service purchased by consumers in the marketplace and used every day by laypeople. This is true even for sophisticated market actors. For example, it took Apple several years to go from the original conception

¹⁸⁶ See B. ZORINA KHAN, *THE DEMOCRATIZATION OF INVENTION: PATENTS AND COPYRIGHTS IN AMERICAN ECONOMIC DEVELOPMENT, 1790–1920* 9–10 (Cambridge University Press 2005) (“The analysis [in this book] emphasizes the role that patents and copyrights played in the securitization of ideas through the creation of tradeable assets: intellectual property rights facilitated market exchange, a process that assigned value, helped to mobilize capital, and improved the allocation of resources. . . . Extensive markets in patent rights allowed inventors to extract returns from their activities through licensing and assigning or selling their rights.”).

¹⁸⁷ See, e.g., B. Zorina Khan, *Trolls and Other Patent Inventions*, *supra* note 77, at 835 (explaining how “specialization and the division of labor are endemic to efficient markets,” and that securitization helped increase the development of technology).

¹⁸⁸ See Michael Risch, *Licensing Acquired Patents*, 21 *Geo. Mason L. Rev.* 979, 979 (2014) (“Patents have always been licensed . . . and acquired.”); see also KHAN, *DEMOCRATIZATION OF INVENTION*, *supra* note 186, at 8–10 (explaining the history of patents in the United States); Lamoreaux et al., *supra* note 68, at 4–5, 82 (“[T]here is actually nothing new about the practice of extracting economic value from patents by selling off or licensing the rights.”). Moreover, as a historical matter, patentees who assigned their rights were among the most productive inventors. See Khan, *Trolls and Other Patent Inventions*, *supra* note 77, at 835 (“Nonpracticing entities and specialists in the enforcement of patent rights were the norm during the nineteenth century . . .”).

¹⁸⁹ See, e.g., F. Scott Kieff, *Coordination, Property & Intellectual Property: An Unconventional Approach to Anticompetitive Effects and Downstream Access*, 56 *Emory L.J.* 327, 399 n.251 (2006) (listing the different incentive based theories for patents, including “incentive to invent, the incentive to disclose, the incentive to commercialize, and the incentive to design around”) (internal quotations omitted).

¹⁹⁰ See *supra* notes 45–49 and accompanying text (describing the various incentives the patent system gives to encourage commercialization).

of the smartphone to the first sale to consumers.¹⁹¹ While the creation of new ideas is certainly something to promote, to the extent that patents actually create new ideas does not bring a new product to market.¹⁹² And, in fact, many inventors lack the resources, capability, or interest necessary to commercialize.¹⁹³

Second, consider the incentive to disclose. Simply devising a new technology, filing a patent application, and receiving a patent does not by itself result in a commercial product or service sold in the marketplace. Rather, new information is disclosed and disseminated among researchers and market actors.¹⁹⁴ But, just as with the too narrow sense of “commercialization” used by critics of the patent licensing business model,¹⁹⁵ disclosure is not achieved merely through the patent document itself. Commercialization provides important disclosure of the patented technology, and arguably improves the quality of the disclosure as well. This is intuitively recognized by anyone who has experienced the difference between reading a treatise and practicing the topic discussed in the treatise, such as between reading about sailing and actually sailing a boat. In the innovation economy, a patented technology sold in the marketplace as an actual product or service makes it possible for third parties to have a better understanding of the scope of the patent and the inventor’s contribution to the field of technology.¹⁹⁶ In fact, it is common today to hear complaints about the lack of proper disclosure in patents,¹⁹⁷ which ultimately led to the Supreme Court hearing its first case in fifty

¹⁹¹ See Shara Tibken, *Apple Engineer: We Wanted to Make a Phone for ‘Normal People’*, CNET (Apr. 4, 2014, 12:21 PM), <http://www.cnet.com/news/apple-engineer-we-wanted-to-make-a-phone-for-normal-people/> (describing how Apple took over three years to make a smart phone that was user-friendly for the average person).

¹⁹² See Sichelman, *supra* note 20, at 343 (“About half, probably more, of all patented inventions in the United States are never commercial exploited.”).

¹⁹³ *Id.*

¹⁹⁴ See, e.g., John F. Duffy, *Reviving the Paper Patent Doctrine*, 98 CORNELL L. REV. 1359, 1363 (2013) (explaining how patents incentivize “the disclosure and teaching of the invention to a workforce”).

¹⁹⁵ See *supra* notes 55–61 and accompanying text (discussing a broader version of the patent system and commercialization).

¹⁹⁶ See Duffy, *Reviving the Paper Patent Doctrine*, *supra* note 194, at 1392 (“That intuitive truth about good *teaching* also directly links with policy concerns that the courts have repeatedly identified as being at the heart of the patent system, which is to provide inventors with exclusive rights that are commensurate with their contributions to public knowledge—that are commensurate with their *teachings*.”).

¹⁹⁷ See, e.g., Lisa Larrimore Ouellette, *Do Patents Disclose Useful Information?*, 25 HARV. J.L. & TECH. 545, 547 (2012) (noting that legal scholars have called for “invigorated disclosure”); Sean B. Seymore, *The Teaching Function of Patents*, 85 NOTRE DAME L. REV. 621, 627 (2010) (proposing a regime of heightened disclosure to the PTO which will transform the “patent into a readable teaching document[,] . . . bridge the disconnect between patent law and the norms of science[,] . . . [and] produce more technically robust patents, which will make it easier for subsequent inventors to improve upon existing patented technology”).

years on the written description and claim definiteness requirement.¹⁹⁸ In this respect, licensing patented innovation to manufacturers facilitates commercialization and, ultimately, the disclosure of the technology in a real-world product or service.¹⁹⁹

Third, consider the incentive to commercialize. The twenty-year term of the patent secures innovators against free-riding second-movers, as discussed above.²⁰⁰ But licensing of a patent by an inventor to someone who can manufacture the product equally facilitates getting a product to market. It simply is brought to market by someone other than the inventor and often by someone who is more knowledgeable and better situated to do so.²⁰¹ This leads to lower prices and more accessible technology for everyone, producing the exact “Progress of Science and useful Arts” that the Constitution expounds and the patent system is intended to create.²⁰² More importantly, the inventor—through licensing fees or profits from selling the patent—obtains additional resources for future invention, reinforcing the incentive to invent.

All of this is easiest to see in the matchmaking function of patent licensing entities, which connect inventors and their technologies with the well-financed and sophisticated companies that are best equipped to commercialize this technology. If licensed *ex ante*, or before a commercialized product enters the market, the relationship between the inventor and the manufacturing company results in a new idea being transformed into a product or service sold in the marketplace. The only difference between this and an inventor directly commercializing is that the entity doing the commercial work *switches* part of the way through the process, achieving the efficiencies of the division of labor and market specialization.

Admittedly, the argument is not as straightforward if the patent licensing company seeks licenses to a patented technology *ex post*, or *after*

¹⁹⁸ See *Nautilus Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014) (“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”).

¹⁹⁹ Better disclosure also makes it more possible for competitors in the marketplace to design around the patented technology in creating competing products and services. Jeanne Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539, 548 (2009) (“[D]isclosure can stimulate others to design around the invention . . .”).

²⁰⁰ See *supra* notes 43–54, and accompanying text (discussing how the patent system encourages commercialization by providing a “first mover” with its own advantages).

²⁰¹ See, e.g., Adam Mossoff, *The History of Patent Licensing and Secondary Markets in Patents: An Antidote to False Rhetoric*, CPIP BLOG (Dec. 9, 2013), <http://cpip.gmu.edu/2013/12/09/the-history-of-patent-licensing-and-secondary-markets-in-patents-an-antidote-to-false-rhetoric/> (quoting Henry Ford’s famous quip that Thomas Edison was “the world’s greatest inventor and the world’s worst businessman”).

²⁰² U.S. CONST. art. I, § 8, cl. 8.

a product is already being manufactured and sold in the marketplace.²⁰³ How can this be considered commercialization? The answer is found by recognizing that the incentive to invent and the incentive to commercialize necessarily work together to further the goals of the patent system.²⁰⁴ The inventor whose patented technology was brought to market by someone else—even without the inventor’s permission—still deserves the reward for being the first to invent a new innovative technology and obtain resources for further invention and innovation. Additionally, the licensing business model may lead to further innovation and potential commercialization, as licensees should pay greater attention to patents at earlier stages. This would allow new products to be brought to market earlier, make it possible for faster design-around work, and foster greater competition, which lowers prices and spurs further innovation.²⁰⁵

In sum, the licensing business model, as best exemplified by formerly manufacturing entities, makes clear that “commercialization” is not synonymous with manufacturing. Instead, it refers generally to the myriad of private-ordering mechanisms that result in bringing new products to the market. Thus, any activity that results in the transformation of a new idea to a marketed product—be it manufacturing, selling, using, or licensing—is commercialization. When viewed properly in this way, licensing thus conforms to the core justifications of the patent system.

B. *Formerly Manufacturing Entities and Commercialization*

Formerly manufacturing entities complicate the stories regarding the patent licensing business model. Rather than interfere with commercialization efforts of other companies, this type of patent licensing entity provides unique and valuable contributions to commercialization that have yet to be considered in the current patent policy debates. This Part will discuss how formerly manufacturing entities participate in commercialization and, more importantly, how they positively affect commercialization in ways that reflect core patent policy. This Part will conclude by offering some recommendations for going forward in both research of patent licensing and its assessment within the patent system.

²⁰³ See Risch, *Licensing Acquired Patents*, *supra* note 188, at 981 (stating that “[e]x post, licensing acquired patents looks like a complete waste of social resources,” and then refuting this point in his article).

²⁰⁴ See *id.* (“[P]atents do not live solely in an ex post world. They simultaneously live in an ex ante world, one where research, development, and licensing opportunities begin even before the patent is acquired.”).

²⁰⁵ See *id.* at 996.

1. *Effects on Commercialization*

Under the proper definition of “commercialization,” formerly manufacturing entities commercialize patented innovation. Originally, the formerly manufacturing entity was engaged in activities that turned new ideas directly into marketed products, such as manufacturing and selling products. When the formerly manufacturing entity shifted from a manufacturing business model to a licensing business model, its primary concern remained the production of actual products or services. The only difference is that the formerly manufacturing entity is now a market intermediary and thus serves a different market function in furthering the commercialization process. A manufacturing business model and a licensing business model both produce the same result—a marketed product output.

In each of the case studies discussed above, the focus of the company is squarely on bringing new products to market. Thus, these formerly manufacturing entities are commercializing and achieving the goals of the patent system. For example, the Italian company’s optics patents and patent applications that Conversant prosecuted and later sold to Google are now being used to support Google’s nascent efforts to supply high speed fiber networks in Kansas City, Missouri, and Kansas City, Kansas.²⁰⁶ Sovereign’s acquisition of Open Market and Transact has allowed the product, relied on by many corporations, to remain on the market and be fully serviced by the software company.²⁰⁷ Immersion’s change in business model from manufacturer to product developer and licensor has permitted its haptic technology to expand into many different market segments through its use of a myriad of licensees.²⁰⁸ Finally, the licensing model of Rockstar may allow the companies in the consortium to consider new products and new markets without the worry of excessive clearance

²⁰⁶ See John Letzing, *Italian Cable Co’s Patents Make Their Way to Google*, DOW JONES FACTIVA (Mar. 5, 2012), <http://www.advn.com/nyse/StockNews.asp?stocknews=BKS&article=51491468> (reporting Google’s acquisition of two hundred optical networking patents from MOSAID in its effort to supply fiber networks for fast Internet connections).

²⁰⁷ See *Legacy*, *supra* note 123 (“Sovereign acquired the Transact software business and its related intellectual property from Divine in 2003, and [is] dedicated to developing and supporting that technology today.”).

²⁰⁸ See *List of Licensees of TouchSense Haptics Technology*, IMMERSION CORP., <http://www.immersion.com/haptics-technology/licensees> (last visited Sept. 29, 2014) (explaining that immersion licenses its haptic technology “to a wide range of partners, from device manufacturers to system integrators and semiconductor partners,” including, among others, LG Electronics, Logitech, Microsoft, Nokia, Samsung, and Sony); *cf.* Press Release, Conversant Intell. Prop. Mgmt., MOSAID Doubles in Size—and Becomes Conversant (Sept. 19, 2013), available at <http://www.conversantip.com/news-article/mosaid-doubles-in-size-and-becomes-conversant/> (reporting that MOSAID changed its name to Conversant to “reflect [its] singular expertise in patent licensing and IP management”).

costs.²⁰⁹ These are just a few examples of the traditional commercialization justification for a business model in the innovation economy.

Perhaps even more important are the unique effects that formerly manufacturing entities have on commercialization. Patent licensing entities of all sorts that are grouped together in the pejorative “patent troll” label are accused of hindering the commercialization of new technology. There are usually two arguments for this claim, and formerly manufacturing entities belie these arguments in important ways.

First, patent licensing entities are said to engage in abusive litigation practices because of the lack of deterrence from fear of a reciprocal lawsuit.²¹⁰ What is rarely acknowledged is that patent licensing entities generally facilitate commercialization by acting as match-makers and market-makers.²¹¹ Furthermore, formerly manufacturing entities provide additional benefits. For example, the expertise of its prior business model gives it the ability to better evaluate patents and the internalized social and commercial norms from the industry in which it operates.

This differentiates formerly manufacturing entities starkly from the bad actors engaged in deceptive and nuisance-like behaviors who lack the larger patent portfolios and existing market relationships that would otherwise constrain them. For this reason, formerly manufacturing entities, as represented by the fact that they are many of the owners of patents that have been sold by the original grantee, are subject to various sources of deterrence from bad behavior. When the business model of a firm shifts, some of its business culture may remain. In fact, as illustrated in the case studies, often employees that were present under the manufacturing business model remain after the shift to a licensing business model. Thus, the formerly manufacturing entity often behaves differently than other patent licensing entities that do not have the same cultural norms ordinarily cultivated from historical work in the relevant industry.

²⁰⁹ See Mueller, *Cisco Might Have Had a Greater Benefit*, *supra* note 171 (“By joining the Rockstar Consortium, Cisco . . . would benefit from licensing income generated from third parties.”).

²¹⁰ See Lemley & Melamed, *supra* note 13, at 2126 (discussing “bottom feeder” patent trolls who are interested in “quick, low-value settlements” and are “not particularly interested in the quality of their patents”); Gerard N. Magliocca, *Blackberries and Barnyards: Patent Trolls and the Perils of Innovation*, 82 NOTRE DAME L. REV. 1809, 1829–30 (2007) (“[A] troll need not hold the rights to a particularly important or valuable patent to get a hefty settlement [A]ssessing the probability of success for an infringement suit is terribly challenging [for a defendant]”); Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583, 1603 (2009) (“[T]he history of patent law shows that these doctrines do not always do an adequate job of preventing rent-seeking. At certain times, and for various reasons, the patent system is overwhelmed with rent-seeking activities [T]he current wave of patent trolls shows that we may very well be undergoing another of these episodes right now.”).

²¹¹ See McDonough, *supra* note 13, at 214–15 (“Just as dealers on the NASDAQ match investors with companies seeking owners and vice versa, patent dealers match patent owners with companies seeking to commercialize a patent.”).

As these formerly manufacturing entities branch out and begin to acquire other parties' patents to add to their portfolio, there is no reason to assume the company's culture would necessarily change. As an example of the business ethos, these firms are likely to "employ a rigorous due diligence process to ensure that the patents they license are of good quality and highly likely to be upheld as valid," and "generally will resort to litigation to enforce its valid patents only after protracted good-faith negotiations" have failed.²¹² Exemplifying this point, Conversant has publicly announced a set of "Patent Licensing Principles" that details its deep commitment to ethical business behavior.²¹³ Conversant has called on other patent licensing entities to join its Patent Licensing Principles, as a way to self-regulate and self-police the important sub-industry of market intermediaries in the innovation industries.²¹⁴

Second, patent licensing entities are accused of delaying patent issuance, holding out on licensing negotiations, and ambushing manufacturers by waiting for them to become invested in the technology, thus increasing the technology's value and royalty rate.²¹⁵ There are three reasons why none of these concerns are applicable to formerly manufacturing entities.

First, formerly manufacturing entities are unlikely to delay patent issuance, as they are generally the commercializing entity at the time the patent is being prosecuted.²¹⁶ At that juncture, there is no benefit in delay because the property rights are available only *after* the patent issues. This is evidenced by the fact that not one of the companies studied in this Article has ever delayed or been accused of delaying the issuance of any of their patents.

Second, formerly manufacturing entities are unlikely to delay licensing negotiations. As illustrated in the case studies, formerly manufacturing entities rarely switch from a manufacturing business model to a licensing business model overnight. Instead, they attempted to license their technology with ongoing manufacturing activities, and some even continue

²¹² Dudas & Kline, *supra* note 115, at 5–6.

²¹³ See *Patent Licensing Principles*, CONVERSANT IP (2013), <http://www.conversantip.com/wp-content/uploads/Conversant-Patent-Licensing-Principles.pdf> (offering ten principles that should serve as the basis of ethical and beneficial patent licensing).

²¹⁴ See *id.* ("[L]icensors and licensees alike must act ethically, responsibly, knowledgeably and with rigor to achieve mutual benefit and economic growth.").

²¹⁵ See John R. Allison et al., *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 683 (2011) (accusing licensing entities of "hiding under a bridge" and "demanding tolls from surprised passersby"); Lemley & Melamed, *supra* note 13, at 2165 ("[Patent trolls] defer licensing discussions until technology users have developed and invested in products that include the patented technologies and are thus less able to switch to alternatives.").

²¹⁶ See Risch, *Patent Troll Myths*, *supra* note 173, at 486 (finding that many sources of non-practicing entity patents were productive companies "attempting to build product or service-based businesses").

to engage in R&D and manufacturing even after they shift business models. When they shifted their business model to licensing, the formerly manufacturing entity may have filed more lawsuits; but this did not cause a delay that would encourage a competitor to invest in the technology in the meantime. Considering that the technology was already out in the open based on the formerly manufacturing entity's attempts to make and sell it, and that licensing overtures were made by the formerly manufacturing entity, it is hard to believe that competitors were caught unaware. As to holdout behavior during licensing negotiations, because formerly manufacturing entities had already been using the technology, they would be in a better position to coordinate complementary technology rights to obtain license fees, rather than holdout and obtain none.

Third, formerly manufacturing entities are unlikely to gain much by delaying the filing of a patent infringement lawsuit. As made clear in the discussion about how competitors are not caught unawares, it is nearly impossible for a formerly manufacturing entity to "sneak up" on a manufacturing company; the technology was already out in the market in some way or another. In other words, formerly manufacturing entities do not hide the ball; rather, they were originally trying to play with the ball out in the open and are now willing to sell the ball to others who also now want to play. Thus, contrary to what many now claim, this type of patent licensing entity poses little to no risk to commercialization.

Finally, in all licensing negotiations, recall that formerly manufacturing entities may actually be better at this role than those patent licensing entities that originated entirely from this business model. Since formerly manufacturing entities either manufactured, or at least attempted to manufacture, the technology themselves, they are often in a better position to know the true value of the technology to producers and consumers. These three points show that the behavior of formerly manufacturing entities does not reflect the concerns about the bad actors who clearly meet the complaints about so-called "patent trolls." This suggests that the "patent troll" rhetoric should be dropped in favor of more analytically precise terminology that properly identifies the various commercial entities working in the innovation industries and their behaviors, including a "formerly manufacturing entity" category. However, it is possible to take the argument one step further. That is, in some respects, formerly manufacturing entities are more beneficial than other types of patent licensing entities.

2. Different from Other Patent Licensing Entities

This Article argues that formerly manufacturing entities are in fact different from other types of patent licensing entities, and should therefore be treated accordingly in the patent policy debates. It is important to understand why these companies are different from other patent licensing

entities, such as universities and research firms, which are typically privileged in the public debates, but not always. For instance, the University of Wisconsin and Carnegie Mellon University have been accused of being “patent trolls.”²¹⁷ Still, prominent academics exclude universities or research firms from the “patent troll” label.²¹⁸ When calling for specialized treatment for a certain type of patent licensing entity, it is essential to understand what it is we value about formerly manufacturing entities that is the same and different from other firms that employ the same business model but are receiving special treatment.

Universities are generally exempt from the “patent troll” label. The common argument is that they are not “patent trolls” because they add technological knowledge to society through the research undertaken by their professors.²¹⁹ Since universities are in the education business, not the manufacturing business, they generally license their homegrown technology, hoping to generate revenue.²²⁰ But while they do license, universities often try to avoid litigation, both because of monetary cost and non-monetary risks, such as alienating potential donors.²²¹ However, universities do sometimes litigate to protect their investments, support

²¹⁷ See Erin Fuchs, *Tech's 8 Most Fearsome 'Patent Trolls'*, BUS. INSIDER (Nov. 25, 2012, 2:01 PM), <http://www.businessinsider.com/biggest-patent-holding-companies-2012-11?op=1> (identifying and compiling a list of patent trolls based on the number of each entity's patents and publicized patent applications as of July 2012); Mike Masnick, *Patent Trolling Carnegie Mellon Wins What Could Be Largest Patent Verdict Ever: \$1.2 Billion*, TECHDIRT (Dec. 27, 2012, 9:55 AM), <https://www.techdirt.com/articles/20121226/17582221493/patent-trolling-carnegie-mellon-wins-what-could-be-largest-patent-verdict-ever-12-billion.shtml> (accusing Carnegie Mellon University of never licensing its infringed patents and just “[s]itting] on [them] and su[ing]”).

²¹⁸ See, e.g., Chien, *Of Trolls, Davids & Goliaths*, *supra* note 28, at 1577–78 (“[Patent trolls] exclude actors in the innovation enterprise who engage in significant research and development activities”); Merges, *supra* note 210, at 1586 n.7 (stating that “any reasonable definition of a troll would exclude” a prolific inventor and innovator); Dennis Crouch, *What is a Patent Troll?*, PATENTLY-O (May 12, 2006), http://patentlyo.com/patent/2006/05/what_is_a_patent.html (excluding entities who do research and development).

²¹⁹ See, e.g., Jeremiah S. Helm, Comment, *Why Pharmaceutical Firms Support Patent Trolls: The Disparate Impact of eBay v. MercExchange on Innovation*, 13 MICH. TELECOMM. & TECH L. REV. 331, 335 (2006) (“The undeniable fact is that universities are active innovators, while patent trolls, almost by definition, are not. . . . [T]his difference is key.”); Mark A. Lemley, *Are Universities Patent Trolls?*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611, 630 (2008) (“University patent owners aren’t trolls in my view when they contribute previously unknown technology to society, rather than just imposing costs on others by obtaining and asserting legal rights over inventions independently developed by others.”).

²²⁰ See, e.g., Jay P. Kesan, *Transferring Innovation*, 77 FORDHAM L. REV. 2169, 2169 (2013) (arguing that universities are interested in “generating licensing income and obtaining reimbursement for legal expenses”).

²²¹ See, e.g., Jacob H. Rooksby, *Innovation & Litigation: Tensions Between Universities and Patents and How to Fix Them*, 15 YALE J.L. & TECH. 312, 318 (2013) (“University involvement as plaintiffs in patent infringement lawsuits . . . has the potential to alienate donors, upset politicians with ties to defendants, and potentially cause universities to be seen as undermining their public-service values.”).

commercialization by their licensees, and generate revenue.²²² In the same vein, research firms do not manufacture or sell their inventions; instead, they develop knowledge and technology to license or sell to manufacturing firms.²²³

Formerly manufacturing entities share some features with universities and research firms that are deigned to be given privileged status as licensing entities. Specifically, formerly manufacturing entities have shown their adeptness at research and development in creating the patented technology that they used to manufacture or sell. Further, formerly manufacturing entities often use their licensing revenue to research and develop new technology. Consider, for example, Conversant. Although it no longer manufactures its DRAM chips, it is doing significant research and development of new flash memory technologies.²²⁴ Similarly, Immersion continues to develop and expand its haptic technology applications.²²⁵ Like universities and research entities, formerly manufacturing entities license their technology to other companies for them to manufacture and sell. And like universities and research entities, formerly manufacturing entities also prefer to negotiate licenses rather than litigate.

Formerly manufacturing entities have at least one advantage over universities, research entities, and licensing entities in being carved out of the “patent troll” label with a privileged status. As mentioned above, there is additional information to be gained through the commercial embodiment of an idea.²²⁶ Although the United States has not returned to the “paper patent doctrine” at the request of many scholars, an actual marketed embodiment of a new idea offers more informational value to both competitors in the marketplace and to follow-on researchers than the inscrutable legalese of a patent. There should not be privileged grants of status to entities that employ the same business model (licensing). But if academics and commentators are going to do so in asserting the extent and scope of the purported “patent troll” problem, and legislatures go so far as

²²² See *id.* at 318–319 (“Universities might litigate to protect their investments in patents, to support commercialization efforts by their licensees, or even—perhaps controversially—to generate revenue.”).

²²³ See Penín, *supra* note 25, at 634 (“Technological firms (often called fabless firms) . . . produce knowledge and new technologies that they then sell to manufacturing firms . . . which use them to develop, produce, and sell tangible goods.”).

²²⁴ See *supra* Section III.B.1 (discussing how after Conversant stopped manufacturing its DRAM chips it continued extensive research and development in creating a new flash memory technology called HLNAND).

²²⁵ See *supra* Section III.B.3 (discussing how immersion has invested its licensing royalties and patent infringement spoils in ongoing research and development efforts to refine its haptics technology).

²²⁶ See *supra* note 197 and accompanying text (arguing that heightened disclosure requirements to the PTO would improve the teaching function of patents).

to write such distinctions into law, then formerly manufacturing entities have as much claim to be treated at least as well as universities and research entities.

3. Recommendations

To be sure, no legal system is flawless, and this includes the patent system. Moreover, there are bad actors in every legal field, including the patent system.²²⁷ However, trying to solve those problems by consolidating all patent licensing entities together without looking at the demonstrably different types, behaviors, or effects of the different types of licensing entities is imprudent.²²⁸ Not all patent licensing entities engage in the bad behaviors often associated with so-called “patent trolls.” Thus, proposals to revise the patent system, including the licensing and litigation rules, should not treat it as a singular issue.

In this respect, formerly manufacturing entities are significant. These companies look more like universities and research firms given their extensive research and development and active licensing of their technologies. This particular type of licensing entity may actually be more useful than universities and research entities. Although formerly manufacturing entities no longer directly bring their own invented technology to market, they do commercialize the technology in positive ways that go above and beyond what universities and research entities do. If the majority of patent licensing entities are formerly manufacturing entities,²²⁹ then this strongly suggests rethinking the push for broad-ranging revisions to the patent system, such as fee shifting provisions, based on equally broad-brushed pejorative attacks on patent licensing entities. Instead, proper reforms can and should target the specific bad actors that do exist, such as the entities that send deceptive and misleading demand letters.²³⁰

²²⁷ For the purposes of this Article, the author takes no particular position on other types of patent licensing entities and the legitimacy of their behaviors under the law.

²²⁸ See, e.g., Penin, *supra* note 25, at 638 (calling for a patent system designed to limit the harm of bad “patent troll” behavior without harming the positive functionality of good patent trolls).

²²⁹ See *supra* note 173 and accompanying text.

²³⁰ See Targeting Rogue and Opaque Letters (TROL) Act of 2014, Discussion Draft of May 15, 2014, H.R. ___, 113th Cong. (2014), available at <http://docs.house.gov/meetings/IF/IF17/20140522/102255/HHRG-113-IF17-20140522-SD002.pdf> (proposing to make “certain bad faith communications in connection with the assertion of a United States patent” unfair or deceptive acts or practices); Terry Unveils Draft Legislation to Address Abusive Patent Demand Letters, U.S. HOUSE OF REPRESENTATIVES ENERGY & COMMERCE COMMITTEE (May 15, 2014), <http://energycommerce.house.gov/press-release/terry-unveils-draft-legislation-address-abusive-patent-demand-letters> (“[The TROL Act] aims to protect businesses from abusive patent assertion entities (PAEs), or patent trolls [by requiring] patent demand letters to include certain basic information to help companies determine whether a letter is legitimate.”); see also Targeting Rogue and Opaque Letters (TROL) Act of 2014, Discussion Draft of July 7, 2014, H.R. ___, 113th Cong. (2014), available at

V. CONCLUSION

This Article challenges two central assumptions in the conventional wisdom about the patent licensing business model. First, not all patent licensing entities are the same. Licensing in various forms has been a key feature of the American patent system for over two hundred years and reflects core patent policy. Second, given that not all patent licensing entities are the same, patent licensing does not necessarily harm commercialization or innovation; in fact, patent licensing is an archetype of commercialization itself. Thus, when assessing patent licensing entities, it is necessary to identify where these companies come from and how they behave, rather than classifying them based on misleading and undefined rhetoric.

In fact, one type of patent licensing entity—the formerly manufacturing entity—contradicts almost all of the allegations targeted at the bad behaviors of so-called “patent trolls.” Yet, they are included within the scope of this pejorative label. As the case studies in this Article reveal, formerly manufacturing entities commercialize patented innovation and reflect the very policies justifying the securing of patents to the owners of new and useful technology. While further study is needed, this Article belies the claims that all “patent trolls” are alike and that they are all harmful to innovation. To the contrary, the formerly manufacturing entity—probably the most widespread and dominant patent licensing entity that exists—creates numerous benefits for both the commercialization of new technology and the ongoing development of new innovation.