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Patent Elves: The Role Of Non-Practicing Patent Owners In The Innovation Economy

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Abstract

The term "non-practicing entities" (NPEs) describes entities that own patents and whose principal activity is licensing them. NPEs do not manufacture patented products; instead, they derive economic value through intellectual property (IP) sales, licensing, or other monetization activity. In recent years, the term NPE has often been associated with the derogatory term "patent troll." However, focusing only on a few bad actors in the IP monetization ecosystem is a disingenuous mistake.

While there are some bad actors, as there are in every industry, the vast majority of monetization is based on entirely desirable activity that helps to fuel further innovation.

This article seeks to put an emphasis on virtuous NPEs, which the author labels "patent elves," and the benefits they bring to innovation markets.

Patent elves use high-quality patents originating from distinguished research and development centers to promote innovation. They exploit these patents, directly or indirectly, creating returns that can be used for further investment in research & development (R&D) and technological advancement. This promotes a virtuous cycle of R&D/return on patented innovation/further R&D.

In particular, the article examines the role of licensing elves: intermediaries that enable small and medium-sized entities (SMEs), universities, and distinguished R&D centers to efficiently monetize their research results through the exercise of intellectual property rights. In doing this, they reduce the complexity of licensing and maximize the economic return for patent holders who are pure scientific entities or lack the financial resources to enforce their IP.

Thanks to patent elves, SMEs, universities and other smaller, innovation-led entities can have the confidence to conduct ongoing R&D. This leads to innovations that, when protected by patents, can ensure a constant flow of licensing revenues to fund further R&D.

In conclusion, this article calls for greater precision in the use of weighted (and often derogatory) terms. Based on the diverse business models employed by NPEs, market participants (and the courts) should be able to identify virtuous behavior and enable elves to help drive technological progress in the innovation economy.

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I. Skallagrimson said: "What good has come from the trolls?" Harald replied: "It is from the deeds of the elves that we have flourishing markets." [1]

As a starting point, **practicing entities** can be defined as organizations that use their own patented technology in the production of goods or services. They are vertically integrated; that is, they handle both research & development (R&D) and the implementation of the resulting innovations through their production (manufacturing or commercialization) processes. They may also license their technologies to other implementers.

A **non-practicing entity**, or NPE, is one that owns patents and seeks to generate economic returns from licensing. Compared to a practicing entity, the NPE does not manufacture products itself, or offer services based on its patents. Since it does not practice its innovations, an NPE is not susceptible to infringement claims from other patent holders. As a result, a cross-license has no value to the NPE; it seeks only monetary consideration for granting licenses to its patents.

Some characterize all NPEs as **patent trolls**, but this usage is wrong. The term is prejudicial. It was coined by Peter Detkin, then a senior IP counsel at Intel, in the late 1990s[2] and formally passed into the legal lexicon when first used in the U.S. Supreme

1. ᚹᚠᛏ ᚷᚢᛞ ᚺᚠᛋ ᚲᛟᛗᛖ ᚠᚱᛟᛗ ᚦᛖ ᛏᚱᛟᛚᛚᛋ? ᛁᛏ ᛁᛋ ᚠᚱᛟᛗ ᚦᛖ ᛞᛖᛖᛞᛋ ᛟᚠ ᛖᛚᚠᛖᛋ ᛏᚺᚪᛏ ᚹᛖ ᚺᚪᚹᛖ ᚠᛚᛟᚢᚱᛁᛋᚺᛁᚾᚷ ᛗᚪᚱᚲᛖᛏᛋ. Old Norse in Younger Futhark runes based on the author's original (English) text.

2. Ironically, in the 2000s, Mr Detkin became a managing partner and a shareholder of Intellectual Ventures. At its height, that company was described as "the ultimate patent troll."

Court in a patent case,[3] though it had already become a commonplace term during the 2000s.

Patent trolls also became a subject of academic interest. For example, the Stanford NPE Litigation Database, calling patent trolls "patent assertion entities" (PAEs), contrasted PAEs with the broader category of non-practicing entities:

> NPEs do not make products or offer services while PAEs—often referred to as "patent trolls"—employ patents primarily to obtain license fees, rather than support the transfer or commercialization of technology. Critics have come to believe that steadily increasing PAE enforcement activity, including litigation, is harming innovation and serving as a tax on producers and consumers.

The database assesses cases brought by PAEs, focusing on three categories, perhaps deeming their conduct the most "trollish": "acquired patents," "corporate heritage," and "individual-inventor-started company."[4]

However, some NPEs are more properly described as "patent elves." It is a term I proposed during the annual AIPLA conference in Washington D.C. in 2006. At the time I suggested:

> [An elf] is a kinder and gentler sort of licensing company than a troll, that acts to propagate technology and encourage R&D by allowing researchers to profit from their labours.[5]

The varied activities of patent elves and how they benefit innovation markets and enable the diffusion of standardized technologies are described next.

II. The Standardization Process and Returns on R&D Investment

In today's global market, the success of so much innovation relies on interoperability, which is essential for the widespread adoption of high-level technology products. Standardization, therefore, plays a crucial role in the innovation process, ensuring that new technologies can work seamlessly across different systems and markets.

A thriving innovation ecosystem relies on global standards and the work of standard development organizations (SDOs). These bodies are central to defining and spreading interoperable technologies like 5G, Wi-Fi, and the IoT. They gather ideas from innovators and are tasked with transforming them into tangible implementable solutions, or standards. The SDOs themselves do not do R&D. Rather they look to their members to make significant financial investments to develop and promote new standards. For example, the total cost incurred by companies involved in both innovation and standardization efforts to develop the MPEG Audio and DVB-T standards has been estimated at approximately €190 million and €96 million, respectively.[6] To incentivize continued innovation and participation in standardization efforts, innovators must be reasonably compensated for their contributions.

Large vertically integrated companies (practicing entities) generate revenues from their product sales. This allows them to re-invest part of their profits in R&D to create new innovations.

3. *Commil USA, LLC v Cisco Systems, Inc* 575 U.S. 632, 649 (2015) (Scalia, J dissenting). Justice Scalia wrote of "the in terrorem power of patent trolls." "Trolls" are not a twentieth century invention: In Norse mythology, the troll is a mythical creature often described as a monstrous, malevolent, and menacing figure that lives in isolated environments such as mountains, forests, or caves. They are generally regarded as evil beings, in contrast to humans, and are often associated with negative influences on human life. See, *e.g.*, I-M Manea, "Elves & Dwarves in Norse Mythology"—*World History Encyclopedia* (2021).

4. The database compiled and compared U.S. patent cases 2010 -2020, "Welcome to the Stanford NPE Litigation Database | NPE Litigation Database." A paper accompanying the database provides further information on these three categories identified as patent trolls: "acquired patents" includes "any NPE primarily in the business of asserting patents that it has acquired from other entities [including] large patent aggregators…," or at times "limited liability companies…formed shortly before litigation commence[s]." "Individual-inventor-started companies" are PAEs formed by the inventor that exist solely to hold and enforce its patents. "Corporate heritage" is a PAE that "occur[s] rarely:" it includes "firms that were successful producers for a sustained period of years but then transitioned to a PAE business model." S.P. Miller *et al.*, "Introduction to the Stanford NPE Litigation Dataset—10.23.2017_JP_KM."

5. "Elf, Patent | Technology and IP Law Glossary." At the same time, I acknowledged that the difference between a patent troll and an elf is one of perception—licensing companies tend to see themselves as nice and friendly elves, while licensees see them as more unpleasant and extortionate trolls. As with trolls, the origin of elves dates back to Norse mythology. Elves (also known as álfar) are mystical beings generally regarded as creatures of great beauty, intelligence, and power. Unlike trolls, elves were believed to bring good fortune, heal illnesses, and protect people from danger. Additionally, elves were considered skilled craftsmen, capable of creating magical and precious objects. See I-M Manea, *op cit* at n 4. Further study could trace the evolution of trolls and elves (through developments promoted by Wagner, Tolkien, Ferrell, and *inter alios*) to their present-day close association with intellectual property rights.

6. The estimation is made by aggregating the average effort in R&D and participation in the standardization process sustained by patent owners involved in the creation of the MPEG Audio and DVB-T standards.

But how do small and medium-sized enterprises (SMEs), universities, R&D centers (whether private or public), or startups manage to sustain their R&D spending? Licensing is the key to creating a sustainable ecosystem for innovation, with revenues from royalties for the use of a patented technology being re-invested in new R&D efforts. This business model ensures a continuous flow of capital to support innovation. It is particularly important for those innovators (discussed in Figure 1) who choose to make their patents essential to the technologies incorporated within standards available on fair, reasonable, and non-discriminatory (FRAND) terms. In this self-sustaining cycle, intangible assets—patent rights—acquire a real economic value.

Without such recognition and rewards, innovators will be discouraged from investing in new research and may choose to opt out of the standardization process. This would lead to a preference for proprietary, closed solutions, harming the goal of achieving common interoperability and ultimately impeding technical progress and societal well-being.

Standard essential patents (SEPs) are a unique category of patents required to implement technical standards adopted by SDOs. SEP owners, by contributing their technology to a standard, agree to make their SEPs available on FRAND terms.[7] The FRAND commitment ensures that interoperable solutions are implemented, benefiting both SEP owners and licensees. It guarantees the use of standardized products and services and fosters innovation, enabling the widespread adoption of new technologies for the benefit of both innovators and implementers.

Figure 1: Continuous Flow Of Capital To Support Innovation

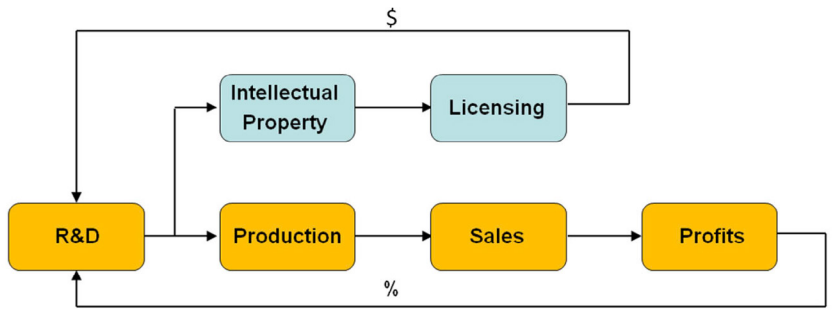
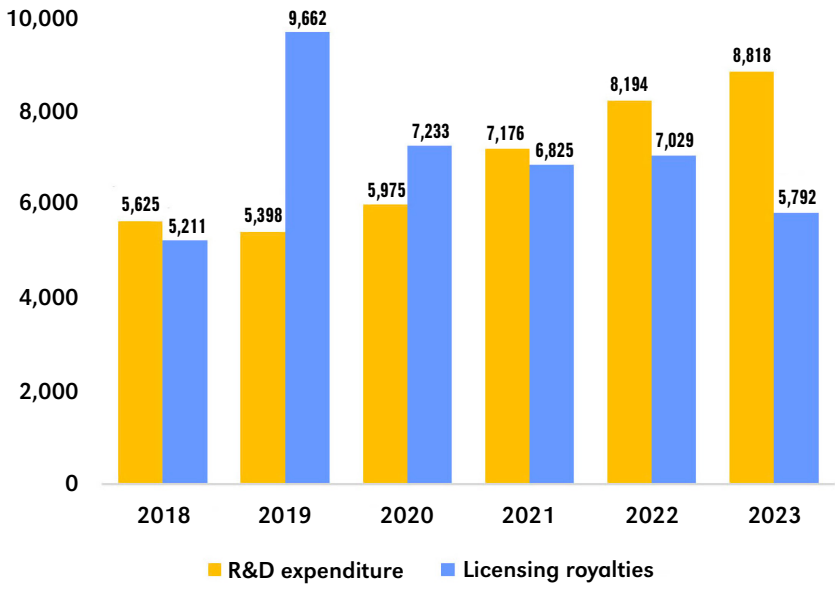


Figure 2: Big-Tech Company Making Substantial Revenues With In-House Licensing Activities



Source: Qualcomm (millions of $)

III. Different Scenarios in Exploiting the Result of R&D

Large corporations typically have the necessary expertise and resources to recoup the costs of innovation and standardization through licensing activities, enabling them to reinvest in further R&D and maintain a competitive edge. These companies often have dedicated legal and licensing departments that manage patent portfolios, negotiate licensing agreements, and handle royalty collection, ensuring a continuous cycle of innovation and financial return.

Qualcomm is a good example of a leading big-tech company making substantial revenues thanks to its in-house licensing activities. This is also a good case demonstrating that an integrated practicing entity often counts on revenues drawn largely from its licensing activities to fund its R&D effort. See Figure 2.

In contrast, universities and research institutions often lack

7. The IPR policy of the European Telecommunications Standards Institute (ETSI) is representative of the importance that SDOs place on SEP licensing. ETSI—Intellectual Property Rights policy and IPR online database.

the in-house skills and infrastructure required to effectively monetize their innovations through licensing. Universities and R&D centers typically focus on research and development rather than the complex legal and business aspects of licensing, making it difficult for them to navigate the commercialization of their intellectual property.

To bridge this gap, universities and R&D centers often need the support of external licensing intermediaries who specialize in negotiating, managing, and enforcing licensing agreements. These are **the elves**. They can help academic institutions identify potential licensees, structure fair and reasonable agreements, and ensure compliance with licensing terms, enabling them to derive value from their innovations.

With the right external support, universities and R&D centers can unlock the financial potential of their intellectual property, ensuring that their research meets broader societal needs, while also sustaining future innovation efforts.[8]

V. Conclusion

The term Patent Troll has been perversely extended to any NPE, but the label is a pejorative that clouds an understanding of the true merit of many virtuous NPEs, notably Patent Elves.

The table below summarizes the activities and motivations of Patent Elves that operate in the standard development/implementation ecosystem through the licensing of SEPs. See Table 1.

It is clear many NPEs play a critical role in advancing technology by supporting R&D and standardization efforts.

The positive contribution of Patent Elves allows innovators, implementers, and end-users to exploit the fruits of R&D and thus ensure a sustainable future for innovation and technological progress. ■

Table 1: Elf

Patents	**Essential, based on independent determination**
Basis for Royalty	**FRAND obligation of the licensor(s)**
Initial Patentee Organisation	**SDO participant (practicing entity, SME, university, R&D institution) whose core activity is innovation**
Risk of Litigation?	**Litigation as a last resort against unwilling licensees**
Ease of Licensing	**Support of skilled licensing intermediaries to facilitate negotiations**
Benefits to Licensors	**Third party manages licensing and royalty collection/distribution, performing services not within the scope of SMEs, universities**
Benefits to Consumers	**Broad, speedier adoption of standardized technologies; Inventive Loop offers promise of further innovations**

8. Leading U.S. universities in early 2021 completed the formation of a joint patent-licensing program that would aggregate complementary patents in certain technologies in the physical science sector and license these in packages. This program, University Technology Licensing Program, received a favorable business review letter from the U.S. Department of Justice, *Letter dated January 13, 2021, of Michael F Murray, Acting Prin Dep'y Ass't Att'y Gen'l to Gerrard Beeney in response to request of University Technology Licensing Program,* available at *https://www.justice.gov/atr/page/file/1352961/dl?inline=*. That letter notes the inefficiencies that the UTLP was designed to address: These hurdles to market efficiencies include resource intensity in commercializing a licensing program, uncertainty as to success, need for a critical mass of patents for program viability, refusal by implementers to take a license from a single university, etc. The letter concludes that UTLP was designed "to create a more efficient mechanism for universities to realize a return on their innovation in physical sciences."