

PLEDGING PATENTS EFFECTIVELY: COPYRIGHT AND OPEN SOURCE AS A FRAMEWORK FOR PATENT PLEDGES

STEPHANIE VU*

INTRODUCTION.....	438
I. BACKGROUND.....	438
A. <i>Patents and Copyright</i>	438
B. <i>Tesla Releases Patents</i>	440
C. <i>Existing and Past Patent Pledges</i>	441
D. <i>Breakdown of IBM's Patent Pledge</i>	443
E. <i>Legal Defenses</i>	444
F. <i>Eco-Patent Commons</i>	445
G. <i>Cross-Licensing</i>	445
H. <i>Dedication to the Public</i>	446
II. ANALYSIS.....	446
A. <i>Copyright and Open Source</i>	447
B. <i>Copyright and Creative Commons</i>	448
C. <i>Applying Creative Commons and Open Source to Patents</i>	449
D. <i>Successful Elements of Open Source and Creative Commons</i>	449
1. <i>Community</i>	449
2. <i>Multiple Layered License</i>	450
3. <i>Attachment</i>	451
4. <i>Ease of Use and Searchability</i>	451
5. <i>Creative Commons Court Cases</i>	452
III. ELEMENTS OF A SUCCESSFUL PATENT PLEDGE	454
A. <i>Two Versions of the Pledge</i>	454
B. <i>Be Specific</i>	455
C. <i>Attachment</i>	456
CONCLUSION	457

* JD Candidate, 2016, University of Colorado Law School, and Lead Articles Editor, Colorado Technology Law Journal. I would like to thank my student note editor Neal Vickery and Professors Brad Bernthal and Harry Surden for their guidance and enthusiasm. I would also like to thank the members of the Colorado Technology Law Journal for the incredible experience and opportunity to be a part of an amazing group.

INTRODUCTION

Tesla Motors, Inc. (“Tesla”) created an electric atmosphere when it announced the release of all its patents. The idea of releasing patent rights through a “patent pledge” has been tried by several companies, but such pledges have never been tested in court. An individual company must craft its own patent releases because models do not exist. On the other hand, creators in the copyright sphere have been successful in structuring reliable systems and models to easily share part or all of their copyrights.

There are four different categories of intellectual property: patent, copyright, trademark, and trade secret. This note focuses on two of those categories, patent and copyright, and examines the release of patent rights through a copyright framework. Several elements stand out as necessary for a successful and long lasting system or agreement, as seen through an analysis of large, successful copyright licensing systems, and current and past patent pledges. Without a strong patent pledge, third parties may be wary of using the pledged patents, leading to little or no use of the patents being used. This is contrary to the goal of most patent pledges: fostering innovation and growth in technology.

Section I will give a brief background on patents, copyrights, Tesla’s patent pledge, past and existing patent pledges, legal defenses to a claim of patent infringement, and alternative ways to release patent rights. Section II will analyze and discuss the elements of two large and successful copyright licensing systems. Section III will discuss necessary elements for a successful patent pledge based on lessons from copyright licensing systems and past patent pledges.

I. BACKGROUND

A. Patents and Copyright

A utility patent gives a patent owner the right to exclude others from making or selling a patented idea for twenty years starting from the date the patent was filed.¹ Obtaining a patent is a costly and time-consuming endeavor, and can require thousands of dollars over several years. The patentee must first file a patent application at the United States Patent and Trademark Office (“USPTO”).² A Patent Examiner then determines whether the patent is novel, is non-obvious, has utility, and meets

1. This period is approximately twenty years. Patent terms can be adjusted through a mechanism called a “Patent Term Adjustment,” if the United States Patent and Trademark Office causes the delay. *See* U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 2733 (9th ed., rev. 7, Nov. 2015).

2. *See* 1-OV DONALD S. CHISUM, CHISUM ON PATENTS § 1 (2015).

disclosure requirements.³ A Patent Examiner can reject a patent application and the patentee can amend or adjust his patent application and send it to the Examiner again for evaluation. This process can be indefinite and can become costly as fees pertaining to additional evaluations amass.

Once the USPTO grants a patent, the patent owner has the burden of enforcing the patent, and is responsible for paying maintenance fees three times after the patent is granted.⁴ Failure to pay the maintenance fee can result in abandonment of the patent.⁵ Third parties can still challenge an issued patent but the patentee has the benefit of presumed validity.⁶ However, any challenge to the patent will result in extra time and money spent to defend the patent against the challenge. While a patent gives powerful rights to a patentee, those rights come with a high time and money costs.

A copyright gives a copyright owner the right to exclude others from making an original copy or derivative copy, and distributing, performing or displaying a copyrighted piece.⁷ Unlike a patent, a copyright is free and automatically granted when a creator fixes an idea in a tangible medium. A copyright owner can register his or her copyright nationally or at the state level, but is not required to do so. Like a patent, a copyright can expire and the owner has the burden of enforcing the copyright.⁸

Unlike patents, if two authors independently create identical works each may have a valid copyright. For example, if each author takes a picture of the same building at the same angle and lighting exposure, both authors have a copyright to their respective photographs. The first photographer would not prevail in a lawsuit against the second photographer for creating the same image so long as both photographs were created independently.⁹ On the other hand, if two inventors invent the same machine at the same or different times, then the inventor who files his application first will be able to sue the second inventor for infringement, even if the second inventor had independently invented the

3. *Id.*

4. *Maintain Your Patent*, USPTO, <http://www.uspto.gov/patents/process/maintain.jsp> (last visited Mar. 22, 2016) (“If a maintenance fee is not paid the patent protection lapses and the rights provided by a patent are no longer enforceable.”).

5. *Id.*

6. *See generally Inter Partes Disputes*, USPTO, http://www.uspto.gov/aia_implementation/bpai.jsp (last visited Mar. 22, 2016).

7. 1 MELVILLE B. NIMMER & DAVID NIMMER, *NIMMER ON COPYRIGHT* § 1.01 (2015).

8. For an individual copyright owner, the copyright lasts for the duration of the author’s lifetime plus seventy years. U.S. COPYRIGHT OFFICE, *CIRCULAR 15A: DURATION OF COPYRIGHT* (2011), <http://www.copyright.gov/circs/circ15a.pdf>.

9. *See* Ross, *Independent Creation is a Defense to Copyright Infringement*, WHH TECH. BLOG (Dec. 19, 2013), <http://www.techpatents.com/Blog/independent-creation-is-a-defense-of-copyright-infringement.html>.

same machine.¹⁰

B. Tesla Releases Patents

On June 12, 2014, Elon Musk, Tesla's CEO effectively released Tesla's patents through a blog post.¹¹ Musk, referring to the small electric vehicle ("EV") market, stated that the goal of releasing the patents was "for the advancement of electric vehicle technology."¹² The patent pledge¹³ appears to have no terms other than "Tesla will not initiate patent lawsuits against anyone who, in good faith, wants to use our technology."¹⁴ This raises the questions: What does "good faith" mean? What protections are available for third parties that use Tesla's patents?

At first glance, Tesla's motives appear altruistic, as Musk argues that the company will never be able to produce enough EVs to solve the carbon crisis on its own. But a deeper analysis illustrates that Tesla may have other motives. If a third party manufactures an EV that incorporates battery technology used in Tesla's patents, the third party will most likely need to buy its battery from Tesla itself.¹⁵ Circumstantial evidence suggests that Tesla may be seeking to increase the demand for batteries it can supply. For example, Tesla is building a large "Gigafactory"¹⁶ that will make Tesla the "world's largest battery producer."¹⁷ Also, in a meeting between BMW, Nissan, and Tesla, the manufacturers reportedly discussed Tesla sharing its "SuperCharging" technology with BMW and Nissan.¹⁸ These initiatives show that Tesla may become a supplier of batteries as well as a strong car manufacturer in the future.

One troubling aspect for third parties who wish to use Tesla's patents is the addition of stipulations by BMW and Nissan in their

10. The current patent system is a "First to File" system. Patents filed before March 16, 2013 are subject to the old "First to Invent" system. *See generally* Jeff Roberts, "First to File" Patent Law Starts Today: What it Means in Plain English, GIGAOM (Mar. 18, 2013, 4:46 PM), <https://gigaom.com/2013/03/18/first-to-file-patent-law-starts-today-what-it-means-in-plain-english/>.

11. Elon Musk, *All Our Patent Are Belong to You*, TESLA MOTORS (June 12, 2014), <http://www.teslamotors.com/blog/all-our-patent-are-belong-you>.

12. *Id.*

13. While Musk's blog post was not titled a "patent pledge," it is referred to as such in this note. Other companies' patent releases are also referred to as a "patent pledges."

14. Musk, *supra* note 11.

15. *See* Max Prince, *Why Did Elon Musk Just Release All of Tesla's Patents?*, ROAD & TRACK (June 12, 2014, 11:35 AM), <http://www.roadandtrack.com/go/news/elon-musk-releases-all-tesla-patents>.

16. Tesla's Gigafactory would produce lithium ion batteries and its goal is to reduce the cost of the batteries by 2020. *Gigafactory*, TESLA MOTORS (Feb. 26, 2014), http://www.teslamotors.com/de_AT/blog/gigafactory.

17. Prince, *supra* note 15.

18. Lisa Winter, *Tesla Release Electric Car Patents to Public*, IFLSCIENCE (June 13, 2014), <http://www.iflscience.com/technology/tesla-release-electric-car-patents-public>.

agreement to share the SuperCharging technology. These stipulations state that BMW and Nissan must adopt “Tesla’s philosophy on charging stations: in other words, never charging customers to recharge at the point of use” and that the charging stations must have high-speed capabilities.¹⁹

The stipulations would make it easier, faster, and more reliable to charge EVs. One stipulation states that the price to recharge an EV must be built into its original purchase price.²⁰ This would result in free charging for EV owners. EV owners would also benefit from faster charging stations provided by Tesla’s technology and would be able to rely on more reliable charging stations, as Tesla’s SuperCharging stations are designed to have multiple stalls so that if one station fails, the remaining stations are still functional.²¹ This is in contrast with Nissan’s current charging station, which typically has one stall.²²

While these stipulations may seem minor, they were revealed after the patent pledge was released. This raises the concern that Tesla may be able to impose other stipulations further down the road that affect all users relying on Tesla’s released patents. On the other hand, these stipulations may be of little concern to smaller auto manufacturers who are more likely to use the patents. So far, the stipulations only apply to specific, large, rival auto companies. Ultimately, the stipulations are beneficial to end users: the owners of EVs.

C. Existing and Past Patent Pledges

Other companies have released patent pledges by various methods, some of which have included terms and stipulations. For example, Google created the “Open Patent Non-Assertion Pledge,” which is more formally structured than Tesla’s release.²³ Google’s patent pledge includes several sections, such as a “Definitions” page and an “Our Pledge” page, which lays out the terms and conditions. Google’s patent pledge resembles a legal contract.²⁴ As of today, Google has released 114 U.S. patents.²⁵ Google’s pledge requires users to place a similar pledge with the same stipulations on any product that incorporates a Google

19. Nikki Gordon-Bloomfield, *Nissan, BMW, Look to Adopt Tesla’s Charging Standard*, TRANSPORT EVOLVED (June 16, 2014), <https://transportevolved.com/2014/06/16/nissan-bmw-look-adopt-teslas-charging-standard/>.

20. *Id.*

21. *Id.*

22. *Id.*

23. *Open Patent Non-Assertion Pledge*, GOOGLE, <http://www.google.com/patents/opnpledge/pledge/> (last visited Mar. 22, 2016).

24. *Id.*

25. *Pledged Patents*, GOOGLE, <http://www.google.com/patents/opnpledge/patents/> (last visited Mar. 22, 2016).

pledged patent.²⁶ This way, Google's patents dedicated to the patent pledge will remain free and open, regardless of how many third-party users they pass through. Google also forbids users from making a profit on any products that incorporate a Google pledged patent.²⁷

Google's patent pledge was released formally. It resembles a contract, laying out terms and definitions and holding the company and its subsidiaries responsible if the contract is breached by the company or its subsidiaries. On the other hand, Tesla's patent pledge was informal; it was released as a blog post and made vague promises not to sue a third-party user who uses its patents "in good faith." Furthermore, Google released a small portion of its entire patent portfolio, whereas Tesla released all of its patents.²⁸ Tesla's patent pledge could be viewed as a marketing move, as it is easy to read and has received a large amount of press. The patent pledge takes no more than ten minutes to read and the majority of the patent pledge explains Tesla's theory, history, and emotional reasoning behind the release. On the other hand, Google's release is long and contract-like so that a layperson may not want to read or be able to understand it. Google's patent pledge resembles a Creative Commons ("CC") or an Open Source type of release. Both CC and Open Source have proven to be long term and successful licensing systems, as discussed further in Section II. Google's patent pledge also seems to be a long-term system on which third-party users can rely.

However, third-party users may err on the side of caution when deciding whether to rely on Tesla's patent pledge. Tesla's patent pledge may be hindered by its casual tone and lack of terms and conditions, which users may not feel comfortable relying on. For example, Tesla's patent pledge does not state whether a third-party user can make a profit on a product that incorporates a Tesla patent. One can assume that a third-party user can make a profit, based on Tesla's goal of increasing the EV market. But the ambiguity is troubling; Tesla's business model can change or Tesla can simply change its mind.

Furthermore, Tesla does not define what "good faith" means, leaving open the possibility of Tesla suing a company by arguing that the company was not using a patent in "good faith." Furthermore, Tesla does not define what would happen in a bankruptcy situation. A new company taking over Tesla may not honor Tesla's patent pledge.²⁹ However, one

26. *Open Patent Non-Assertion Pledge*, *supra* note 23.

27. *Id.*

28. Google released 245 patents, but has at least 51,000 patents and patents pending. *See Pledged Patents*, *supra* note 25; *see also* Antonio Regalado, *Google's Growing Patent Stockpile*, MIT TECH. REV. (Nov. 29, 2013), <http://www.technologyreview.com/news/521946/googles-growing-patent-stockpile/> ("Google says it now controls more than 51,000 patents and patents pending.").

29. Richard Johnson & Michael Damiani, *Tesla's Patent Pledge: Is It Enough?*, BLG

could argue that if Tesla intends to follow its patent pledge and not enforce its patent rights, then it does not need a long and formal patent pledge. Also, the patent pledge's ambiguity could work in favor of a third-party user in court, because a court might find that a reasonable person would have relied on it. Furthermore, investing in developing a formal patent pledge can be costly and is probably low on Tesla's priority list. However, the ambiguity can cause problems in the future if Tesla changes its business model or plans.

D. Breakdown of IBM's Patent Pledge

IBM also gave a patent pledge ("IBM Pledge"), which released 500 patents and stated that IBM committed not to assert the 500 listed patents.³⁰ However, IBM later sent a third-party user a letter stating that the user was infringing 174 patents, two of which were on the IBM Pledge.³¹ While IBM validly informed the third-party user of patent infringement of IBM's patents, IBM raised concerns within the Open-Source Software community by including the two IBM Pledge patents in the letter, which may have violated the IBM Pledge. This illustrates an ambiguity in the patent pledge. Either the IBM Pledge is broad enough to allow IBM to assert its patent rights against a company for patent infringement, including those on the IBM Pledge, if the company infringes on patents not on the IBM Pledge.³² Or, IBM wrongly asserted the two patents from the IBM Pledge.

One commentator made the distinction that the IBM Pledge used the word "assert" rather than the word "sue," with the former having a broader scope.³³ In other words, sending a letter to a company asking it to cease infringing is considered an "assertion," whereas if the patent pledge had said "a covenant not to sue," then a letter to a company asking it to cease infringing would not have been within the scope of the patent pledge.³⁴ Others, including members of the Open Source

(July 23, 2014), http://www.blg.com/en/newsandpublications/publication_3807 ("[E]ven if Tesla remains committed to its patent pledge, its patents can be sold or assigned to third parties who may choose to enforce the full complement of their entitled patent rights.").

30. *IBM Statement of Non-Assertion of Named Patents Against OSS*, IBM, <http://www.ibm.com/ibm/licensing/patents/pledgedpatents.pdf> (last visited Mar. 22, 2016) [hereinafter *IBM Statement*].

31. Charles Forelle, *An Open Question About a Pledge*, WALL ST. J.: REAL TIME BRUSSELS (Apr. 6, 2010, 7:34 PM), <http://blogs.wsj.com/brussels/2010/04/06/an-open-question-about-a-pledge>.

32. Little information is available on this situation and one can assume it was settled or IBM simply did not follow up with the infringing user's reply letter. No records of a complaint can be found.

33. Florian Mueller, *Clarification of Terminology: 'Assert' vs. 'Sue'*, FOSS PATS. (Apr. 9, 2010), <http://www.fosspatents.com/2010/04/clarification-of-terminology-assert-vs.html>.

34. *Id.*

community, conclude that IBM has broken its patent pledge.³⁵ Regardless, the IBM situation illustrates that a company can change its mind and that an ambiguous patent pledge may not be reliable.

IBM's patent pledge raises concerns with Tesla's patent pledge because the two are similar. IBM's patent pledge is one page, contains few legal words, and is simple.³⁶ Furthermore, IBM's patent pledge stated that the goal of the pledge was to "foster innovation,"³⁷ much like Tesla's goal to foster innovation and increase the EV market. IBM and Tesla's patent pledges may be more demonstrative of marketing moves, rather than long-lasting and robust patent pledges.

E. Legal Defenses

Estoppel and laches are two possible defenses available to third-party users if Tesla sues one of these parties for infringement. However, it is difficult to ascertain whether either of these defenses would be successful in a lawsuit because no patent pledge has been fully tested in court. Also, because this note focuses on elements of a successful patent pledge, only a brief outline of each defense is given below.

Laches bars recovery for pre-filing infringement suits when an owner unreasonably delays suit to the prejudice of the accused infringer and does not bar recovery for post-filing infringements.³⁸ Laches are presumed after six years from the point of the patentee knowing about an infringement, but remaining inactive.³⁹ The result of a successful laches defense is that a patentee cannot recover any past damages, but the patentee can still recover post-filing damages and obtain an injunction.⁴⁰

An equitable estoppel arises when: (1) the patent owner through conduct, positive statement, or misleading silence represents to the infringer that his business will be unmolested by claims of infringement; and (2) in reliance on that representation, the infringer continues or expands his business.⁴¹ Unlike laches, estoppel does not have any presumptions.⁴² The effects of a successful estoppel defense are a bar

35. Florian Mueller, *IBM Breaks the Taboo and Betrays Its Promise to FOSS Community*, FOSS PATS. (Apr. 6, 2010), <http://www.fosspatents.com/2010/04/ibm-breaks-taboo-and-betrays-its.html>.

36. *IBM Statement*, *supra* note 30.

37. *Id.*

38. *A.C. Auckerman Co. v. R. L. Chaides Constr. Co.*, 960 F.2d 1020 (Fed. Cir. 1992), *overruled in part by* *S.C.A. Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 807 F.3d 1311 (Fed. Cir. 2015) (modifying the laches defense in patent cases in light of *Petrella v. MGM*, 134 S. Ct. 1962 (2014), which eliminated laches in copyright cases).

39. *Auckerman*, 960 F.2d at 1027.

40. John B. Campbell, Jr., *A Decade of Aukerman: An Analysis of Laches and Estoppel in the Federal Circuit*, 43 IDEA 299, 306 (2003).

41. 6A DONALD S. CHISUM, CHISUM ON PATENTS § 19.05 (2015).

42. Campbell, *supra* note 40, at 307.

against recovery of pre-filing damages, post-filing damages, and injunctions.⁴³

F. *Eco-Patent Commons*

A patent community currently exists where patent owners can “pledge” their patents to further technology that improves the environment.⁴⁴ Companies that pledge their patents to this Eco-Patent Commons are “subject to a covenant, or pledge, by the patent owner not to assert the patent against an environmentally beneficial use of the invention.”⁴⁵ However, the Eco-Patent Commons is fairly new and was created in 2008.⁴⁶ The Eco-Patent Commons is also very narrow as it is only open to environmentally beneficial patents.⁴⁷ The Eco-Patent Commons eventually plans to hold board meetings as well as establish membership dues to pay for maintaining its database and website. Because the Eco-Patent Commons does not currently have a centralized source that can handle disputes between a company and an accused infringing party, one can assume it is currently relying on its users to self-enforce. However, because the Eco-Patent Commons is still fairly new, it will take several years to see its impact and whether it will be a success.

G. *Cross-Licensing*

Cross-licensing is when two or more companies grant licenses to each other to use each companies’ patents and agree not to sue each other for use of these patents.⁴⁸ Google has signed cross-licensing agreements with at least three other companies with stated goals of reduced patent litigation and increased innovation.⁴⁹ While details of these cross-licensing agreements are not public, they demonstrate that companies are willing to work toward reduced litigation, which is costly and time-

43. *Id.* at 310.

44. *About the Eco-Patent Commons*, ECO-PATENT COMMONS, <http://ecopatentcommons.org/about-eco-patent-commons> (last visited Mar. 22, 2016).

45. *Frequently Asked Questions*, ECO-PATENT COMMONS, <http://ecopatentcommons.org/frequently-asked-questions> (last visited Mar. 22, 2016).

46. Press Release, Env’tl. L. Inst. (Oct. 22, 2013), http://ecopatentcommons.org/sites/default/files/docs/epc_press_release_10-22-13_0.pdf.

47. *Frequently Asked Questions*, *supra* note 45.

48. *What is Cross-Licensing?*, WISEGEEK, <http://www.wisegeek.com/what-is-cross-licensing.htm> (last visited Mar. 22, 2016).

49. Eric Pfanner, *Google and Samsung Sign Broad Cross-Licensing Agreement*, N.Y. TIMES (Jan. 27, 2014), <http://nyti.ms/19WYFIF>; Cisco, *Google Sign Patent Agreement*, REUTERS (Feb. 4, 2014, 8:49 AM), <http://reut.rs/1iiWYPo>; Emil Protalinski, *Google and Verizon Cross-License Patents to ‘Reduce the Risk’ of Future Litigation*, VENTUREBEAT (Dec. 16, 2014, 7:15 AM), <http://venturebeat.com/2014/12/16/google-and-verizon-cross-license-patents-to-reduce-the-risk-of-future-litigation/>.

consuming, and toward increased innovation.⁵⁰ These goals are similar to those of patent pledges, as patent pledges are often created to increase innovation and—in Tesla’s case—reduce future litigation.⁵¹

H. Dedication to the Public

The USPTO allows a patent applicant to “dedicate to the public the entire term, or any terminal part of the term, of the patent granted or to be granted.”⁵² In other words, a patent applicant or owner can release all or part of a patent to the public through the USPTO. A benefit to third-party users would be that the patent owner could not sue a third-party user for infringement if the patent owner had dedicated his entire patent to the public. The third party would also have the benefit of the USPTO’s support and documentation. Furthermore, the disclaimer would act as a public publication, which would then block anyone who would try to obtain a separate patent on the invention.⁵³ If a company was sure that it wanted to fully release its patents, without the option of changing its mind and enforcing the patents in the future, then a company could release its patents through the USPTO by filing a disclosure containing a dedication of the patent to the public.

II. ANALYSIS

Copyright has two systems to allow users to easily license their work: Open Source and Creative Commons.⁵⁴ Both Open Source and CC are successful systems through which creators of works can easily share all or part of the rights to their works with third-party users. Both Open Source and CC have elements that can guide and frame future patent pledges. Neither makes the copyrighted materials “free” in terms of cost, but both make the material free for users to share or, depending on the license, modify. Both are easy to track and attach to copyrighted materials and both have extensive documentation to explain to authors the rights each license confers. Furthermore, both systems have large communities that support and, sometimes, self-enforce the systems.

The nature of copyright also contributes to the ease and success of

50. Protalinski, *supra* note 49.

51. See Chris Welch, *Google Announces Open Source Patent Pledge, Won’t Sue ‘Unless First Attacked’*, VERGE (Mar. 28, 2013), <http://www.theverge.com/2013/3/28/4156614/google-opa-open-source-patent-pledge-wont-sue-unless-attacked>.

52. U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 1490 (9th ed., rev. 7, Nov. 2015) (quoting 35 U.S.C. § 253(b)).

53. See generally 35 U.S.C. § 102(a)(2) (2012).

54. Open Source can refer to FOSS (Free and Open Source Software) or FLOSS (Free/Libre and Open Source Software). These distinctions will not be discussed in this note, but for more information see Richard Stallman, *FLOSS and FOSS*, GNU OPERATING SYS., <https://www.gnu.org/philosophy/floss-and-foss.html> (last updated Nov. 09, 2015).

both of these systems. Because copyrights automatically attach to a work when it is fixed in a *tangible* form, it is easy for an author to then attach a copyright symbol or license to it. On the other hand, patents are granted by the USPTO and companies do not have a way to affix a new symbol to the official patent to symbolize a release of rights. When third-party users use a copyrighted material with a CC license, it is easy for the third-party user to affix the same license to his new work. This is currently not feasible for patents, as a new symbol cannot or would not be easy to attach to a new patentable work. Finally, because the number of authors with copyrighted works is much larger than the number of inventors with patents, the community for copyrighted works has a large supply of authors willing to develop and maintain CC and Open Source, whereas the community of patent owners and inventors is naturally much smaller.

A. Copyright and Open Source

There are two systems of open-source licenses: the Open Source Initiative (“OSI”) and the Free Software Foundation (“FSF”). In general, “Open Source” means that a piece of software can be freely used, changed, and shared by anyone.⁵⁵ Open source does not necessarily mean something can be used free of charge;

This is a common misconception about what “open source” implies. Programmers can charge money for the open source software they create or to which they contribute. But because most open source licenses require them to release their source code when they sell software to others, many open source software programmers find that charging users money for *software services and support* (rather than for the software itself) is more lucrative.⁵⁶

More specifically, both OSI and FSF provide information to authors or guide authors in picking an appropriate license for their work, depending on that author’s work and intent. For example, FSF provides a “GNU General Public License,”⁵⁷ which can be easily copied and pasted to the start of each source file.⁵⁸ The GNU General Public License is considered to be a strong “copyleft” license, which means that any software derived from software distributed under this license inherits the

55. OPEN SOURCE INITIATIVE, <http://www.opensource.org> (last visited Mar. 22, 2016).

56. *What is Open Source?*, OPENSOURCE.COM, <https://opensource.com/resources/what-open-source> (emphasis in original) (last visited Mar. 22, 2016).

57. GNU stands for “Gnu’s Not Unix.” Richard Stallman, *The GNU Manifesto*, GNU OPERATING SYSTEM, <https://www.gnu.org/gnu/manifesto.html> (last updated June 2, 2015).

58. *GNU General Public License*, GNU OPERATING SYSTEM, <https://www.gnu.org/copyleft/gpl.html> (last updated Feb. 9, 2016).

public license.⁵⁹ The license restricts a third-party user from modifying open-source software, then making the software proprietary.⁶⁰ Instead, the resulting, modified software must also be free to users and carry the same GNU General Public License. OSI also provides a guide to choosing an appropriate license and links to licenses.⁶¹

These licenses are generally easy to implement, are user friendly, and provide a variety of choices. FSF and OSI provide ample guidance to explain each license and guide authors to the appropriate license. Furthermore, because the licenses can be easily copied and pasted into the software, the licenses are easy to track and find. FSF and OSI are both widely used in the Open Source community, and their ease of use and simplicity contribute to their success.

B. Copyright and Creative Commons

Creative Commons, like Open Source, is a collection of licenses that are user friendly and easy to implement. Because a copyright attaches automatically to a work when it is created, users that wish to release their work cannot easily release their rights on their own. CC not only allows users to release their works easily, but provides different levels of licenses to control how many rights within each copyrighted work are released.

One aspect that contributes to CC's success is the ability to track licenses, in a similar way to open-source licenses. However, CC licenses have three "layers": a Legal Code, a Commons Deed, and a machine readable version.⁶² The first layer, or the Legal Code, is written much like a legal license using terms of art such as "consideration" and "licensor."⁶³ The Commons Deed, or human readable portion, is written in a simplified and shortened version that a lay person can quickly and easily read.⁶⁴ The machine readable portion is software code written in CC Rights Expression Language, which allows search engines and other technology to recognize and search by licenses.⁶⁵ A user can search for works that utilize a CC license on popular search engines, such as Flickr,

59. *What is Copyleft?*, GNU OPERATING SYSTEM, <https://www.gnu.org/copyleft/copyleft.html> (last updated Oct. 3, 2015).

60. *GNU General Public License*, *supra* note 58.

61. *See About Open Source Licenses*, OPEN SOURCE INITIATIVE, <https://opensource.org/licenses> (last visited Mar. 22, 2016).

62. *About the Licenses*, CREATIVE COMMONS, <https://creativecommons.org/licenses/> (last visited Mar. 22, 2016).

63. *See, e.g., Attribution 4.0 International Legal Code*, CREATIVE COMMONS, <https://creativecommons.org/licenses/by/4.0/legalcode> (last visited Mar. 22, 2016).

64. *See, e.g., Attribution 4.0 International Commons Deed*, CREATIVE COMMONS, <https://creativecommons.org/licenses/by/4.0/> (last visited Mar. 22, 2016).

65. *About the Licenses*, *supra* note 62.

Google, and Wikimedia Commons.⁶⁶

C. Applying Creative Commons and Open Source to Patents

A system like CC may be difficult to adapt to patents, but creating such a system would have many benefits. It is particularly difficult because the players are different; patents are usually sought by large companies or independent inventors. The high fees and length of time to get a patent reduces the number of patent applicants. On the other hand, copyright automatically attaches, has no direct fees or lengthy waiting times, and thus the pool of copyright holders is much larger. Essentially, everyone has copyrighted material, whether it is an email or a poem haphazardly written on a napkin. Perhaps one of the reasons Creative Commons is successful is because the pool of creators is much larger and works are copyrighted and disseminated much more quickly than patents are.

A version of CC for patents could benefit large companies like Google. If such a system were available, Google would not have had to spend time and money to develop a lengthy custom patent pledge. Also, a third-party user of Tesla's patents could rely on a standardized system such as CC that, with time, could become universally recognized. However, for large companies like Tesla and Google, it might instead be in their best interest to have custom contracts or licenses. Currently, CC offers six licenses,⁶⁷ but the available licenses may not have certain aspects that a large company is looking for. Companies that write their own patent pledges would have more control, and can use this control to their advantage.

D. Successful Elements of Open Source and Creative Commons

There are many elements that contribute to the success of CC and Open Source. In this section, these key elements are identified, discussed, and applied to patent pledges.

1. Community

One of the elements common to both CC and Open Source is a community of dedicated people. Open Source is fueled by a community belief that sharing resources and ideas will lead to more innovation. Consider SparkFun Electronics, a successful company in Boulder, Colorado, which largely bases its business model on the open source philosophy.⁶⁸ SparkFun believes companies that rely too heavily on IP

66. *Id.*

67. *Id.*

68. *What is SparkFun?*, SPARKFUN, <https://www.sparkfun.com/static/about> (last visited

protection are at a disadvantage because those companies spend more time and money on gathering and enforcing IP, rather than on research and innovation.⁶⁹ A company may get caught up suing infringing companies and ultimately fall behind the market.

In the first paragraph of Tesla's blog post, Musk states "in the spirit of the open source movement," which is perhaps a nod to using open source as a symbol of trust.⁷⁰ The main sources of funding for open-source software have been installation, repairs, and maintenance.⁷¹ Tesla may be positioning itself to do the same for third-party users of its patents. As stated above, if users design EVs that utilize Tesla's patents, these users would require batteries and Tesla would be in a prime position to supply users with the batteries they need. Furthermore, Tesla may have a competitive edge over third-party battery manufacturers by having a stronger marketing image and culture generated from its patent pledge. Also, if Tesla remains the largest battery manufacturer, the price of their batteries will inevitably drop, while maintaining quality, which would make Tesla's batteries very competitive.

2. Multiple Layered License

Another element that contributes to the success of CC is its multiple layers for each license. The Commons Deed allows a copyright owner and third-party users to quickly understand what rights are being offered. The Legal Code, on the other hand, lays out the specific terms and conditions. Theoretically, the Legal Code would be used in court to determine the limits and bounds of the license. This dual layer allows a third-party user to quickly gather what kind of license a CC work is utilizing and decide whether to use the work. If a third-party user decides to use a particular CC work, then he or she can read the detailed Legal Code to gain a full understanding of the license.

Tesla, among other companies, could benefit from a patent pledge with two versions. A third-party user could read a condensed and easy-to-read version of the patent pledge to quickly determine whether to use Tesla's patents. Then if the third-party user decides to use a particular patent, the user can read the long form version of the patent pledge to gather the detailed terms and to make a final decision on whether to use the patents.

Mar. 22, 2016).

69. *Id.*

70. Musk, *supra* note 11.

71. *What is Open Source?*, *supra* note 56.

3. Attachment

Another element that contributes to CC's success is the ability to attach a CC license to a copyrighted digital work, both on the surface and as machine-readable code. The machine-readable code attaches to a copyrighted work when the creator chooses a CC license and allows search engines to find works that have a CC license attached. A CC license can also be attached on the surface. For example, one can add "CC BY-SA 2.0" to a picture or at the beginning of a written work to signal the existence of a CC Attribution Share-Alike 2.0 license.

Attaching a pledge to a patent may be difficult to do because of the inherent differences between a patent and a copyright—and it may not be necessary. A copyright creator holds the right to create copies; therefore, if a creator attaches a license to the first version of a newly created copyrighted work, only he or she can make a second or third copy with the same license attached. One can then assume that any version without a license attached is an infringing work.⁷² On the other hand, a patent gives the patent owner the right to exclude others from making, selling, or using a product. A patent infringer would not be copying the physical piece of paper that the patent is printed on, rather, he or she would be copying the idea. It would be difficult to "attach" anything to each piece made by a third-party user; a third-party user would essentially have to apply for a "permit" from the patent owner. This would result in a higher cost of time and money to the patent owner, who would be left reviewing applications of third-party users to ensure that the patents will be used in a way specified by the patent pledge. Furthermore, patents are public and a third-party user could bypass a permit, at the risk of being sued for improper use.

4. Ease of Use and Searchability

Other, related, elements that contribute to CC's success are its ease of use and the ability to search for CC work. The machine readable code that attaches to a digital CC work allows search engines to find all images using a CC license. Furthermore, the search engine can filter by type of license. This aids both creators and third-party users immensely. Third-party users can quickly find CC works to use and users that know which type of licensed work they want to use can easily filter by license. For creators, making works searchable by license is beneficial because it provides wider exposure to their works. For example, a photographer may release a handful of photographs by attaching a CC license to them in order to expose his or her work to a wider audience. A third-party user

72. As long as the work was not an independently created work that happens to resemble the first creator's work exactly.

may find one of the photographer's works, use it, and may enjoy the photographer's style enough to hire the photographer to create more photos exclusively for the user.

It may be difficult to make patents searchable by pledge type, but it would be beneficial to third-party users. A possible structure would be to build this function into Google Patents. Google Patents already allows a person to search for patents by various fields and elements, such as by patent number, assignee, inventor, and keyword. A third-party programmer could "tag" all the patents belonging to a pledge and link to the specific pledge. For example, a person would search for "software" with a "Patent Pledge?" box checked. The results would show all patents with the keyword "software" that belong to a patent pledge, such as Tesla, Google, and IBM. Each individual patent would then have a link to its parent patent pledge. However, this would require a third-party programmer, or Google, to create the system. Furthermore, there are few existing patent pledges, and most can be found quickly. This solution may be more beneficial in the long run once more companies decide to pledge their patents.

5. Creative Commons Court Cases

CC is largely self-enforced. Although international courts have upheld a CC license, CC licenses have not yet been fully tested in U.S. courts.⁷³ In *Curry v. Audax*, a Dutch court held that the defendant had violated the plaintiff's CC rights.⁷⁴ The plaintiff had posted pictures of his family onto Flickr with a BY-NC-SA license, meaning that a user could share and transform the pictures, but the user had to give credit to the original author, could not use the pictures for commercial use, and a transformed picture had to carry the same license as the original picture.⁷⁵ The defendant then used four of the plaintiff's photographs without the plaintiff's permission.⁷⁶ The Dutch court held that the defendant had violated the plaintiff's CC rights because the defendant did not seek permission from the plaintiff and because the defendant was

73. At the time of printing, at least one district court decision has found a CC license to be valid. In *Drauglis v. Kappa Map Group, LLC* the court upheld a CC license and used traditional contract law to interpret the license. 128 F. Supp. 3d 46, *4 (D.D.C. 2015). The court found the defendant had not violated the plaintiff's CC license when the defendant used the plaintiff's photograph in an Atlas and gave appropriate credit to the plaintiff. *Id.* at *10.

74. Rb. Amsterdam 9 maart 2006, KG 2006, AV4204 m.nt JK (*Curry/Audax*) (Neth.), translated in *Curry Case (English)*, CREATIVE COMMONS WIKI 4–5 (Lennert Steijger & Nynke Hendriks, trans.), <https://wiki.creativecommons.org/images/3/38/Curry-Audax-English.pdf>.

75. *Id.* at 3; *Attribution-NonCommercial-ShareAlike 2.0 Generic (CC BY-NC-SA 2.0)*, CREATIVE COMMONS, <https://creativecommons.org/licenses/by-nc-sa/2.0/> (last visited Mar. 22, 2016).

76. *Curry Case (English)*, *supra* note 74, at 4–5.

a commercial newspaper making a profit.⁷⁷ The court further held that the defendant could not use any future photograph found on Flickr from the plaintiff without the plaintiff's permission.⁷⁸ *Curry*, decided in 2006, was the first case to rely on the CC license.⁷⁹ The court discussed the rights that the BY-NC-SA license had conferred to the plaintiffs and also made a decision based on the license.

In *Chang v. Virgin Mobile*, decided in 2009, the U.S. District Court for the Northern District of Texas was presented with another alleged breach of a CC license.⁸⁰ The complaint focused on privacy rights issues and was dismissed for lack of personal jurisdiction.⁸¹ The plaintiff claimed that the defendant violated the plaintiff's daughter's privacy rights because the defendant used a photograph of the plaintiff's daughter, who was a minor, without the plaintiff's permission.⁸² The photographer had uploaded the picture to Flickr under a BY license, or an Attribution License, which only placed the restriction that any user had to give credit to the author.⁸³ The license had no other restrictions, and so a user could use the photo for commercial use and/or as a derivative.⁸⁴ The plaintiff also claimed that CC did not give them adequate notice that the license did not protect publicity and privacy rights.⁸⁵ An important takeaway from this case is that CC only protects an author's copyrights, not his or her publicity and privacy rights.⁸⁶ While this case was not focused on the CC license itself, it demonstrates that courts might abide by terms found in CC licenses.

In *Lichôdmapwa v. L'asbl Festival de Theatre de Spa*, decided in 2010, a Belgian court held that the defendant had violated the plaintiff's CC rights.⁸⁷ The plaintiff was a band who had released a song under the

77. *Id.*

78. *Id.* at 5.

79. *Curry v. Audax*, CREATIVE COMMONS WIKI, https://wiki.creativecommons.org/wiki/Curry_v._Audax (last visited Mar. 22, 2016).

80. *Chang v. Virgin Mobile USA, LLC*, Civil Action No. 3:07-CV-1767-D, 2009 U.S. Dist. LEXIS 3051, 2009 WL 111570 (N.D. Tex. Jan. 16, 2009); Evan Brown, *No Personal Jurisdiction over Australian Defendant in Flickr Right of Publicity Case*, INTERNETCASES (Jan. 22, 2009), <http://blog.internetcases.com/2009/01/22/no-personal-jurisdiction-over-australian-defendant-in-flickr-right-of-publicity-case/>.

81. Brown, *supra* note 80.

82. *Id.*

83. *Id.*; *Attribution 2.0 Generic (CC BY 2.0)*, CREATIVE COMMONS, <http://creativecommons.org/licenses/by/2.0/> (last visited Mar. 16, 2016).

84. Brown, *supra* note 80.

85. *Chang v. Virgin Mobile*, CREATIVE COMMONS WIKI, https://wiki.creativecommons.org/Chang_v._Virgin_Mobile (last visited Mar. 22, 2016).

86. *Id.*

87. Tribunal de Première Instance [Civ.] [Tribunal of First Instance] Nivelles, 11 ème ch. Oct. 26, 2010, 09-1684-A (Belg.); *see also 09-1684-A (Lichôdmapwa v. L'asbl Festival de Theatre de Spa)*, CREATIVE COMMONS WIKI, [https://wiki.creativecommons.org/09-1684-A_\(Lich%C3%B4dmapwa_v._L%27asbl_Festival_de_Theatre_de_Spa\)](https://wiki.creativecommons.org/09-1684-A_(Lich%C3%B4dmapwa_v._L%27asbl_Festival_de_Theatre_de_Spa)) (last visited Mar. 16,

CC BY-NC-ND license, which meant that a user could copy the work but had to give credit to the author, could not use it for commercial use, and could not distribute a derivative, or transformative, copy.⁸⁸ The defendant was a theater company that had used twenty seconds of the band's song in a commercial.⁸⁹ The defendant had claimed ignorance of the license; however, the court rejected this defense.⁹⁰ The court held that the defendant had violated all three portions of the plaintiff's license because they had created a derivative work, used it for a commercial purpose, and did not attribute credit to the plaintiff.⁹¹ The court reasoned that because the defendant was a large theater company who dealt with licenses as part of their industry, it was the defendant's duty to research whether the song contained a license.⁹² The court ultimately awarded the plaintiff €4,500.⁹³

These cases demonstrate that a CC license has credibility in some courts around the world. While the *Chang* case did not focus on the CC license, it demonstrated that a U.S. court would at least acknowledge a CC license and its terms. These cases also demonstrate that courts are willing to accept a unified licensing system. While a patent pledge has never been fully tested in court, there are elements derived from CC and Open Source that a company can build into its pledge to ensure that third-party users will feel confident in using the pledge.

III. ELEMENTS OF A SUCCESSFUL PATENT PLEDGE

The following elements are derived from CC, Open Source, and elements from existing patent pledges as discussed in Sections I and II. These elements are focused on patent pledges that are designed to release patents to a large number of third-party users, such as those made by Google and Tesla. A smaller patent pledge, perhaps between two companies, would be more akin to a cross-licensing agreement, as discussed in Section I(G). A company could also execute both a patent pledge and cross-license agreement, as Google has done.

A. Two Versions of the Pledge

A company that wishes to make a patent pledge should release two versions of the patent pledge. This is beneficial to third-party users, the

2016) (summarizing the case in English).

88. 09-1684-A (*Lichôdmapwa v. L'asbl Festival de Theatre de Spa*), *supra* note 86; Attribution-NonCommercial-NoDerivs 2.0 Generic (CC BY-NC-ND 2.0), CREATIVE COMMONS, <https://creativecommons.org/licenses/by-nc-nd/2.0/> (last visited Mar. 22, 2016).

89. 09-1684-A (*Lichôdmapwa v. L'asbl Festival de Theatre de Spa*), *supra* note 87.

90. *Id.*

91. *Id.*

92. *Id.*

93. *Id.*

courts, and the company itself. Like CC, one version can be a simplified version of the pledge that a lay person can understand, and the second version can be the longer contract portion of the pledge that can hold up in court.

B. Be Specific

Patent pledges benefit from specificity. For example, having a “Definitions” page, like the one Google provides, can help define ambiguous terms. Also, defining uses may be beneficial to a company or group that is seeking to control the intent and purpose of the third-party users’ use of the patents. For example, EcoPatents’ goal is that third-party users will use patents from EcoPatents for the purpose of inventing new and environmentally beneficial technology. EcoPatents restricts patent owners from asserting their patent rights against a third-party user if the third-party user is using the patents for an environmentally beneficial technology. However, a patent owner who released his patents through EcoPatents can still assert his patent rights against a third-party user if the third-party user is using the patent for anything other than an environmentally beneficial technology, such as to improve the steering of a car.

A patent pledge will also be more beneficial if it addresses common scenarios that a third-party user might be concerned about, such as bankruptcy, patentability, and profits. The patent pledge can ensure that in a bankruptcy situation the next company who obtains the patents will have to honor the patent pledge. Without a clause to this effect, it would be unclear what would happen to the patent pledge if a successive company controlled the new patents. The successor company could withdraw the patent pledge or claim that the pledge does not apply to it. Furthermore, it is unclear whether the successor company could immediately assert its patent rights against all current infringers. A patent pledge can remove these uncertainties by including a clause that addresses this situation. For example, the clause can state that any successors are bound by the patent pledge. Alternatively, the clause can state that the patent pledge will no longer be effective once it is controlled by another company; however, past third-party users will be protected. The latter would be more difficult to control, however, because third-party users would need a way to prove that they were using the patent when the patent pledge was in effect.

A patent pledge should also specify whether a third-party user can obtain a patent that utilizes a patent from the patent pledge. For example, the pledge could include a clause stating that any new patentable invention that utilizes a patent from the patent pledge can be patented by the third-party user, under the condition that the new patent is also

pledged. Alternatively, the clause could state that the new patentable invention can be patented by the third-party user, but the new patent cannot be used to generate profit. However, this would be difficult to enforce, as it would require the company to monitor each third-party user. Without a tracking system, it would be a daunting task for a company to attempt to track third-party users. Lastly, the clause can state that the new patentable invention can be patented by the third-party user without any restrictions. This would require no effort for the company to enforce and would not require tracking third-party uses.

The elements discussed above are examples of specific clauses that can benefit a patent pledge. However, they are not a complete list of clauses that should be included in a patent pledge and scenarios specific to a company should also be considered by the company when drafting a patent pledge.

C. Attachment

The attachment element applies more broadly; a company should try to develop a way to attach its patent pledge to a third-party user's work.⁹⁴ Like CC, the attachment would allow third-party users to show that they are using a pledged patent. This would put future users on notice that a particular patent is part of a patent pledge. For example, if User A uses a patent from a patent pledge, then attaches a marker to show that the patent is part of a pledge, User B may look at A's work and see the marker. User B may realize that he can also use the same specific patent. Furthermore, User B will be on notice that if he uses the same patent, he will be subject to conditions found in the patent pledge. Another method would be if the patent pledge requires that any new patentable invention must be pledged, then a marker can also be attached to the new invention to show that it is subject to conditions found in the patent pledge.

Developing an attachment element would also make a search for pledged patents easier, as discussed in Section II(D). Furthermore, if a third-party user could have a marker to show the date he began using the pledged patent, this marker could be used as evidence in a court case to prove that the third-party user was using a legitimate pledged patent within the patent pledge's timeframe. For software patents, this could be easily implemented as it could be essentially the same marker in the code as in CC, FSF or OSI licenses.

94. For a discussion of implementing various types of registration systems, see Jorge L. Contreras, *Patent Pledges*, 47 ARIZ. STATE L.J. 543, 594-607 (2015).

CONCLUSION

When Tesla announced the release of all its patents, the news was both exciting and promising. However, the actual patent pledge itself leaves many questions unanswered for third-party users. Third-party users may be wary of using a Tesla patent because the pledge is ambiguous and vague. Tesla's intent to increase innovation in the EV market may fall flat if third-party users are unwilling to risk a potential future lawsuit.

Based on an analysis of existing long-term patent pledges from other corporations and industries, as well as an analysis of Creative Commons and the Free Open Source Software system, several elements stand out that contribute to a successful patent pledge. A patent pledge is most beneficial when there are two versions, one that is easy to read and one that can stand in court. The first version will allow laypersons to understand the patent pledge and the second version will allow the patent pledger to rest assured that the pledge is legally sufficient.

A patent pledge should also be specific and define what would happen in common situations, such as bankruptcy, restrictive uses, and future patentable inventions. Specificity will define the boundaries of the patent pledge, and will give third-party users assurance that their use is valid. A vague pledge may result in a third-party use that is unclear whether it is valid under the pledge, and may lead to litigation to determine the boundary. Litigation could lead to less use of the patent pledge by third-party users for fear of falling outside the scope of the pledge. This would frustrate the purpose of most patent pledges, which is generally to increase use of a patent or increase innovation.

Lastly, a patent pledge is most beneficial if it has a way to attach to a third-party user's work. This would allow tracking of patents and also provide the third-party user proof of using a pledged patent validly. Third-party users may feel more secure in their use if a tracker can be used to prove that their use is valid. Furthermore, tracking may allow patent pledgers to monitor the use of their patent and determine whether others are also pledging. This type of data can be analyzed to provide several useful conclusions, such as the trend and direction of the market or whether a certain patent has more utility than another—and, possibly, why.

Patent pledges have existed for some time, yet have never been challenged in court. Therefore, it is difficult to determine what would make a patent pledge valid and successful. By analyzing existing long-term patent pledges, Creative Commons, and Open Source, a model for a successful patent pledge has emerged. These elements are not exhaustive

and other elements can be added. By integrating these elements, patent pledgers can help ensure that third-party users will have the confidence to utilize and build upon current pledged patents to create new and innovative technology.