TFM 2017; 3(2), s. 67–76

DISRUPTING THE TRADITIONAL PATENT SYSTEM: THE EMERGENCE OF NEW MODELS*

GELENEKSEL PATENT SISTEMININ BOZULMASI: YENI MODELLERIN ORTAYA ÇIKIŞI

Natacha ESTÈVES**

ABSTRACT

The Open Source and Free Software movements in copyright have, in their own way, challenged the traditional exclusive rights — based system. However, when it comes to patents, it would appear that the traditional model — underpinned by the assumption that for an innovation to be economically viable, an inventor must be able to exclude others from making, using, or selling his innovation — still prevails.

The common understanding of the encouragement of innovation providing the necessity for strong exclusive patent rights is nevertheless nuanced by the recent development of atypical models. The models that will be discussed in this paper do not challenge patents per se (i.e., a right to prevent anyone from making and using the patented invention), but rather the way patents are being used.

Relying on a growing literature on so-called "open patents" and on selected examples (i.e., patent pledges), this proposed paper will investigate recent "openings", so to speak, of exclusive intellectual property rights (IPRs) and how they affect our understanding of patents as well as the legal instruments currently available to apprehend such new models.

Keywords: *Open Patenting, Patent Pledges, Patent Licenses.*

* This paper was presented at the "III. International Symposium on Intellectual Property Law" held on 25th May 2917.

** Sciences Po, Law School, Paris, (natacha.esteves@sciencespo.fr).

(Geliş Tarihi : 30.04.2017/ Kabul Tarihi : 17.10.2017)

I. INTRODUCTION

Conforming to the traditional incentive theory, patents are apprehended as the most viable option to foster innovation. A patent is a property right on an invention,[1] giving its holder an exclusive right that allows him or her to exclude others from making, using, offering for sale, or selling his or her patented invention. This exclusive right is a way to ensure the promotion of innovation. Hence, a patent acts as an incentive to invent and the infringement action against free-riders allows the patentee to have her right complied with. Commonly, patents are considered to be strong tools for encouraging innovation.[2] Consequently, over the past two decades, patent regimes have gone through changes aimed at reinforcing the exclusive rights granted to the patentees.[3]

Reinforcing and unifying patent regimes areverified both at the substantial and procedural levels.[4] Patents have expanded geographically and been extended to new fields (computer programs, biotechnology and business methods in some countries).[5] This trend of reinforcing and expanding patents is supported by the idea that exclusive rights are the sole way to protect and encourage innovation; excluding free-riders is essential for engaging in innovation.

Consistently, one would then pursue to expanding their rights in order to secure their innovation. Yet, one can now observe the development of unconventional models, along the side of the traditional patents, challenging the strong exclusive right-based approach. Indeed, patents would not only be exclusionary tools but inclusionary tools as well. The models we will describe below however propose more inclusive mechanisms: indeed patents would not only be exclusionary tools but inclusionary tools as well.[6]

We determine that there are two categories of these new inclusive models. The first use patents as inclusionary tools by resorting to licenses; although these often utilise atypical licenses the resulting form is similar to a patent pool or club. The second, patent pledges, do not resort to licenses, instead they take the form of promises that questions the common available legal instruments and most importantly the enforceability of such promises.

1 **Vivant**, Michel (2005), Droit des Brevets, Edition Dalloz, p.2.

2 European Commission: "Patents are key tools to encourage investment in innovation and encourage its dissemination".<http://ec.europa.eu/growth/industry/intellectual-property/patents/index_en.htm>. See also European Commission Trade Policy: "Protection and enforcement of intellectual property are crucial for the EU's ability to stimulate innovation and to compete in the global economy". <http://ec.europa.eu/trade/policy/accessing-markets/intellectual-property/index_en.htm>. The EU has also launched the Innovation Union Initiative and praise the merits of strong IP protection: "In our increasingly knowledge-based economies, the protection of intellectual property is important for promoting innovation and creativity, developing employment, and improving competitiveness". <http://ec.europa.eu/growth/industry/intellectual-property/index_en.htm>. The same discourse is found at the WTO level: "Ideas and knowledge are an increasingly important part of trade. Most of the value of new medicines and other high technology products lies in the amount of invention, innovation, research, design and testing involved [...] Creators can be given the right to prevent others from using their inventions, designs or other creations and to use that right to negotiate payment in return for others using them. These are intellectual property rights. Governments and parliaments have given creators these rights as an incentive to produce ideas that will benefit society as a whole". <https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm> (accessed 14 April 2017).

3 **Remiche**, Bernard (2002),'Révolution Technologique, Mondialisation et Droit des Brevets', Revue Internationale de Droit Economique (t. XVI, 1), pp. 83-124 p.95. See also **Martinez**, Catalina/ **Guellec**, Dominique (2004), Overview of Recent Changes and Comparisons of Patent Regimes in the United States, Japan and Europe, Chapter 7: OCDE (editor) Conference on Patent, Innovation and Economic Performance, 28-29 August 2003, Paris. p.128. See also **Geiger,** Christophe (2013), The Social Function of Intellectual Property Rights, or How Ethics Can Influence the Shape and Use of IP Law': Elgar, Edward/ Dinwoodie, Graeme B. (eds.), Intellectual Property Law: Methods and Perspectives, Cheltenham, UK/Northampton, MA, Max Planck Institute for Intellectual Property & Competition Law Research Paper No. 13-06, p. 153-176.

4 Since patents are tools to encourage innovation and its dissemination, the EU decided to create uniform patent protection, cost saving procedure and measures to enhance patent exploitation. EU Commission (2016) "In 2012, EU countries and the European Parliament agreed on the patent package, a legislative initiative consisting of two regulations and an international agreement that lay the ground for the creation of unitary patent protection in the EU. [...] Unitary patent protection will make the existing European system simpler and less expensive for inventors. It will end complex validation requirements and drastically limit expensive translation requirements in participating countries. Consequently, it is expected to stimulate research, development and investment in innovation, helping to boost growth in the EU". <http//ec.europa.eu/growth/industry/intellectual-property/patents/unitary-patent/index_en.htm>. (accessed 14 April 2017).

5 "A patent that applies to all objects". **Vivant**, Michel (2006), 'Le système des brevets en question: Brevet Innovation et Interêt Général', Larcier (editor) Conference Le Brevet: pourquoi et pourquoi faire?Louvain la Neuve, Belgium. p.24. **Cornish**, William (2004), Intellectual Property. Omnipresent, Distracting, Irrelevant?, Clarendon Law Lectures, p. 1. "IPRs appear to be spreading like a rash, particularly across new technologies and threatening to leave few patches of unblemished skin".

6 **Van Overwalle**, Geertrui (2015), Inventing Inclusive Patent: From Old to New Open Innovation: Drahos, Peter/ Ghidini, Gustavo/ Ullrich, Hans (eds.), Essays on Intellectual Property, V. 1, Edward Elgar. Van Overwalle proposes an "inclusive patent" regime that will co-exist with the traditional patent system (different from the models that we will be describing in this paper). The "inclusive patent" will offer a right to include, instead of a right to exclude, enabling he owner to include others. The latter will be able to control licensing condition and ensure the compliance with open source requirements. This regime would be developed as a semi-codified regime (in this case the patent entitlement is provided by law) and as the open source copyleft type license (built by private parties). See also **Dussolier**, Séverine(2013), The Commons as Reverse Intellectual Property or the Model of Inclusivity: Howe, Helena/ Griffiths, Jonathan (eds), Concepts of Property in Intellectual Property Law, Cambridge Intellectual Property and Information Law (No. 21), Cambridge University Press, pp. 258-281.

II. THE PHENOMENON OF "OPEN PATENTS": UNCONVENTIONAL PATENT POOLS

Similarly to Open Source and Free Software, the models described in this part leverage exclusive rights to include others (although to various degrees) instead of excluding them.[7] These models are very diverse and feature different characteristics and purposes. Yet, these models have all in common to all work around the idea of inclusivity providing innovators freedom to operate. These models would qualify as "open patenting" practises. According to Maggiolino and Montagnani open patenting is a legal phenomenon of standardised contractual terms and conditions; open patenting necessitates two elements, a patented invention and the will of the patentee to license it outside of a traditional license schemes.[8]

A. THE DEFENSIVE PATENT LICENSE (DPL)

The Defensive Patent License[9] (DPL) is considered as a « patent-non-aggression-pact », intending to create a set of viral,[10] bilateral obligations preventing offensive patent litigation[11] and promoting freedom to operate and innovate. The DPL is "a standardised open patent license designed to encourage the creation of a broad, decentralised network of open innovation communities that both patent their innovation with a commitment to defensive purposes and license them on a royalty free basis to any others who will do the same".[12] The DPL grants every DPL user a perpetual, worldwide, royalty-free license to every other DPL user's entire current and future patent portfolio.[13] If a DPL user wants to cease offering his patent to the other users, he has to provide a six-month notice to other DPL users and future parties. The DPL user cannot revoke any licenses before the end of the notice period. At the end of the notice period, the remaining DPL users may revoke their licenses toward the users who have left.

B. THE OPEN INNOVATION NETWORK (OIN)

The OIN is also designed around the idea of using patents for defensive purposes. The OIN defines itself as a defensive patent pool[14] with the specific goal of protecting open source developers.[15] The OIN is a shared defensive patent pool that acquires

7 **Dussolier**, Séverine (2007), 'Sharing Access to Intellectual Property through Private Ordering', Chi.-Kent. L. Rev. V. 82, p. 1391. See also **Xifaras**, Mikhail (2010), 'Copyleft and the Theory of Property', Multitudes 2, No. 41, pp 50-64.

8 **Maggiolino**,Mariateresa/ **Montagnani**, M. Lilla (2011),'Standardized Terms and Conditions for Open Patenting', Minnesota Journal of Law, Science & Technology, V. 14, pp. 785-816. See also from the same authors (2009),'From Open Source Software to Open Patenting: What's New in the Realm of Openness?', International Review of Intellectual Property and Competition Law, V. 42, pp. 804-832.

9 <https://defensivepatentlicense.org> (accessed 14 April 2017).

10 The term "viral" is used for Free Software and Open Source licenses. A viral clause guarantees that any derivative work will be licensed under the same conditions. The user has to grant the same freedom he initially received to any subsequent users.

11 Offensive patent litigations are launched by what is termed Patent Assertion Entities also known as Patent Troll. PAE are types of Non Practising Entity (NPE). An NPE is an entity that own patents for a product or a process but has no intention of developing or making anything with it. A PAE or Patent Troll will acquire a large amount of patents in order to launch infringement suits against practising companies or individuals whom they affirm have infringed on their patents. They do not use their patent to make anything and only acquire patent to file lawsuits and drive revenues from litigation.

12 **Schultz**, Jason/**Urban**, Jennifer (2012),'Protecting Open Innovation. The Defensive Patent license as a New Approach to Patent Threats, Transaction Costs, and Tactical Disarmament', Harvard Journal of Law and Technology, V. 26(1), p.38.

13 Defensive Patent License: Article 2 DPL 1.0 Grant: "Licensor hereby grants and agrees to grant to such DPL User a worldwide, royalty-free, no-charge, non-exclusive, irrevocable [...] license, perpetual for the term of the relevant Licensed Patents, to make, have made, use, sell, offer for sale, import, and distribute Licensed Products and Services that would otherwise infringe any claim of Licensed Patents. A Licensees sale of Licensed Products and Services pursuant to this agreement exhausts the Licensors ability to assert infringement by a downstream purchaser or user of the Licensed Products or Services", Article 1.16 DPL 1.0 [...] "the Licensors commitment to offer a license to its Patents under the DPL, or, if such Licensor has no Patents, the commitment to offer a license to any Patents it may obtain in the future under the DPL. DPL users, licensees and licensors refrain from any offensive patent infringement action against one another. In case of an offensive claim by a DPL user against its licensor or any other DPL user, the licensor can revoke its license and other DPL users may suspend their license as well to the DPL user asserting its patents offensively", Article 3 DPL 1.0 [...] "Licensor reserves the right to revoke and/or terminate this License with respect to a particular Licensee if: Licensee makes any Infringement Claim, not including Defensive Patent Claims, against a DPL User; or Licensee grants an exclusive license, with the right to sue, or assigns or transfers a Patent to an entity or individual other than a DPL User without conditioning the transfer on the transferee continuing to abide by the terms of this License". <https://defensivepatentlicense.org> (accessed 14 April 2017).

14 The OIN counts as members Google, Red Hat, NEC, IBM, Philips, Sony, Suse/Novell. http://www.openinventionnetwork.com/ (accessed 14 April 2017).

15 The Open Innovation Network, "The Open Invention Network is a shared defensive patent pool with the mission to protect Linux" […] "Any company, project or developer that is working on Linux, GNU, Android or any other Linux-related software is welcome to join OIN, free of charge or royalties.Open Invention Network was created to ensure a level playing field for Linux, safeguarding developers, distributors and users from organizations that would leverage intellectual property to hinder its growth and innovation. We do this by acquiring and sharing intellectual property to promote a collaborative Linux ecosystem. We do this by providing a royalty-free license to OINs strategic intellectual property portfolio and cross licensing Linux System patents between OIN community members". <http://www.openinventionnetwork.com/> (accessed 14 April 2017).

patents and licenses them royalty-free to entities that in exchange agree not to assert their own patents against Linux and Linux-related systems and applications. The beneficiaries (licensees) are any company or organisation that agrees to refrain from using its patent portfolio against the Linux System. The OIN provides participants with licenses to all patents owned by other OIN licensees related to the Linux system. The purpose of the OIN is to protect the GNU/Linux ecosystem, acting like a shield, by limiting negative effects on patent challenges brought by companies who are not involved in open source. Thus in order to protect the GNU/Linux ecosystem, the OIN acquires patents.[16] By acquiring valuable patents (Linux-related or not), the OIN aims at incentivising companies to join OIN (since the companies will receive the patents under a royalty-free license)[17]and also to deter companies from threatening either OIN members and licensees or the Linux community at large.

C. THE LICENSE-ON-TRANSFER AGREEMENT (LOT AGREEMENT)

Correspondingly,a License-On-Transfer Agreement (LOT Agreement) offers a protection mechanism against non-practising entities otherwise known as patent trolls. A LOT Agreement is a standardised, networked, royalty-free patent license-On-Transfer (LOT) patent license agreement.[18] The license is perpetual and will last until the patent subject to the license expires. Under a LOT Agreement, participants agree that when a patent is transferred (to a non-participant) it is automatically licensed to the other participants in the LOT network.[19] The DPL, LOT Agreements and the OIN mainly aim at creating a safe environment for innovators relying on defensive mechanisms in a similar way as patent pools do.

D. CAMBIA - BiOS LICENSES

The BiOS licenses created by CAMBIA create a "safe environment" but insist less on defensive aspects.[20] The BiOS licenses create a pool of technology, however it would not be a traditional patent pool. Indeed, as opposed to a traditional patent pool open to only certain participants who already own technologies, the BiOS license creates a more inclusionary mechanism. This pool or "common" as termed by CAMBIA, is not reserved for a particular technology and thanks to the licenses, the pool is expected to increase in size with a variety of technologies. Also, contrary to traditional patent licenses, BiOS licenses do not require any royalties or fees from the licensee. CAMBIAs technologies[21] are available royalty-free for use in research or in creating products, by anyone in any country, based on a legally binding agreement. All the agreements are non-exclusive. The licensees are obliged to share any improvements they might make on the licensed technologies and agree not to prevent other licensees from using the technologies and improvements for developing different products.

Although these models are unconventional in the way they make use of patents as inclusionary tools they still use a traditional legal tool: a license. Using a license as a form of collaboration between licensors and licensee is not new and licenses are the usual tools for organising collaboration between

16 These acquired patents are not necessarily Linux related. OIN has acquired various U.S. Patents. For a list of the OIN patents. <https//www.openinventionnetwork.com/about-us/us-patents-owned-by-oin/> (accessed 14 April 2017).

17 OIN license Article 1.1: "OIN, grants to You and Your Subsidiaries a royalty-free, worldwide, nonexclusive, non-transferable license under OIN Patents to make, have made, use, import, and Distribute any products or services. In addition to the foregoing and without limitation thereof, with respect only to the Linux System, the license granted herein includes the right to engage in activities that in the absence of this Agreement would constitute inducement to infringe or contributory infringement (or infringement under any other analogous legal doctrine in the applicable jurisdiction)".

18 **Hayes**, David L./ **Schulman**, Eric C. (2014), An Updated Proposal for a License on Transfer (LOT) Agreement,<http://ssrn.com/abstract=2463660> (accessed 14 April 2017).

19 The transfer of the patent to another entity than a LOT user is called "triggering event". The triggering event causes the license to be effective. Hence, participants in the LOT network are protected from potential future attacks if the patent is later transferred to a Patent Assertion Entity (PAE) or Troll. The license will become effective only when patents are transferred to a non-participant in LOT. According to his authors, LOT is aimed at reducing the availability if patents to PAE. PAE cannot extract patent rent from LOT users, since they also have a license. Also, the LOT system would increase the freedom to operate. Indeed, members of the LOT network obtain a royalty-free license to the transferred patents.

20 CAMBIA is a non-profit research Institute based in Canberra, Australia. It was established in 1991 by Richard Jefferson. <http//www.cambia.org/daisy/cambia/home.html> (accessed 9 May 2016). CAMBIA aims at creating "new technologies, tools and paradigms to promote change and enable innovation». The BiOS aim at «ensuring common access to the tools of innovation, to promote the development and improvement of these tools, and to make such developments and improvements freely accessible to both academic and commercial parties under substantially similar conditions". see recitals of the CAMBIA `Biological Open Source' (BiOS) License for Plant Enabling TechnologiesVersion 1.5,<http://www.bios.net/daisy/bios/mta/agreement-patented.html> (accessed 14 April 2017).

21 Specifically Plant Enabling Technologies. <http://www.cambia.org/daisy/cambia/73.html>

the actors of innovation.[22] As we explained above, open patenting consists in licensing patents outside of the traditional scheme. In this instance, "outside of the" traditional scheme is to be understood as the uncommon conditions to be found in open patent licenses such as royalty free, non-exclusive, for both research and commercial purposes, etc.

Ultimately these models, however, create atypical patent pools. Commonly patent pools can take different forms[23] and these models are just ones of the many shapes used.[24] Similarly to patent pools these models are agreements between patent owners to license one or more patents to one another. Notwithstanding that these models are untested in court[25] and present some originality, they still use known legal instruments — licenses — that are tools patent lawyers are familiar with even if in the case of open patents they display somewhat conditions. However, there exist other models that do not only question the use of patents as exclusionary tools but also question the kind of legal tools that are available to delineate new models.

III. THE PARTICULARITY OF PATENT PLEDGES

A. PATENT PLEDGES

The models we described above can be considered as coordinated models. Indeed, patents are shared between a defined group (DPL users, OIN, participants, CAMBIA, licensees) with predetermined forms (standard licenses). Patent pledges differ from those models because they display a more unilateral character.[26] Patent pledges are promises made by patent holders not to assert their rights, a promise to limit the enforcement of their rights. Contreras describes patent pledges as instruments creating "a little-understood middle ground between the public domain and exclusive property rights".[27] Commonly, these types of promises are made in the context of FRAND commitments[28] and standard setting organisations. However, one now sees these pledges being made outside of any standard setting organisation and outside any FRAND framework.[29]

1. The Tesla Pledge

Tesla Motors announced that it "will not initiate patent lawsuits against anyone who... wants to use... [its] technology".[30] The purpose of the pledge is to "clear the path to the creation of compelling electric vehicles".[31] Tesla conditioned the use of its patented invention on "good faith"[32] which made the promise

22 **Pénin**, Julien (2011), Le brevet d'invention comme l'instrument de coordination de l'innovation ouverte: Corbel, Pascal/ Le Bas, Christian (eds.),Les nouvelles fonctions du brevet, approches économiques et managériales, Economica p. 63.

23 Patent pools can take different forms such as joint licensing, licensing administrator, or patent platforms. Verbeure, Birgit, Patent pooling for gene-based diagnostic testing: **Van Overwalle**, Geertrui (ed) (2009), Gene Patents and Collaborative Licensing Models, Patent Pools, Clearinghouses, Open Source Models and Liability Regimes, Cambridge University Press. Patent pools can take different forms such as joint licensing, licensing administrator, or patent platforms. p, 3-32.

24 They can be compared to "clubs of patentees". Some are more favorable to the patentees, some or more oriented toward users' rights: **Maggiolino**, Mariateresa/ **Montagnani**, Maria Lillà (2015),'Pledges and Covenants: The Keys to Unlock Patents', Bocconi Legal Studies Research Paper No. 2615061. <https://ssrn.com/abstract=2615061> (accessed 14 April 2017).

25 Their impact is yet to be measured: what about the incentives? What about economic viability? What about anti-competitive aspects? **Van Overwalle**, Geertrui (2015), Inventing Inclusive Patent: From Old to New Open Innovation: Drahos, Peter/ Ghidini, Gustavo/ Ullrich, Hans (eds.), Essays on Intellectual Property, V. 1, Edward Elgar., p.41-46.

26 **Contreras**, Jorge L.(2015),'Patent Pledges', Arizona State Law Journal, V. 47(3), 543; University of Utah College of Law Research Paper No. 93. pp. 564-565. <https://ssrn.com/abstract=2525947>. Contreras classifies pledges into unilateral and coordinated pledges: "I divide patent pledges into two principal categories: coordinated pledges and unilateral pledges. Generally speaking, coordinated pledges are made by members of a defined group, according to some predetermined form or formula, with respect to a defined technology or set of patents. Unilateral pledges, on the other hand, are one-off commitments made independently and voluntarily by patent holders". It is to be specified that we do not consider here the OIN as a patent pledge as Contreras does. We have decided to put the OIN with open patenting practises because the latter uses licenses similar to CAMBIA and the DPL.

27 **Contreras,** Patent Pledges. For a list of pledges see <http//www.pijip.org/non-sdo-patent-commitments/> (accessed 14 April 2017).

28 FRAND (Fair, reasonable and non-discriminatory) are commitments by which patent holders promise to licence their patents to manufacturers/implementers of standardized products on particular terms: fair, reasonable and non-discriminatory terms. **Contreras**, Patent Pledges, p. 546.

29 **Contreras**,Patent Pledges; and **Contreras**, Jorge L. (2015),'A Market Reliance Theory for FRAND Commitments and Other Patent Pledges', Utah L.Rev. V. 2, American University, WCL Research Paper No. 2014-26, <https://ssrn.com/abstract=2309023>

30 The Tesla Pledge (2014) on Tesla's Blog, at <https//www.teslamotors.com/blog/all-our-patent-are-belong-you> (accessed 14 April 2017).

31 Idem. Musk (Tesla CEO) explains that electric car represent only 1\% of the sales of manufacturers. Tesla found itself unable to answer the demand of electric vehicles due to the carbon crisis. Renouncing to assert patent right will enable a rapidly-evolving technology platform and the production of electric vehicles. In this case patents are considered as "land mines » inhibiting others. Patent might have been a good thing in the past but they now impede innovation only profiting big corporations and lawyers and amount to « lottery tickets to a lawsuit".

32 The good faith condition has since then been specified: "A party is "acting in good faith" for so long as such party and its related or affiliated companies have not: asserted, helped others assert or had a financial stake in any assertion of (i) any patent or other intellectual property right against Tesla or (ii) any patent right against a third party for its use of technologies relating to electric

somehow unclear, and adding to this fact was that the pledge was published on a blog. The promise's very informal character and its lack of legal certainty raised concern with regards to its enforceability.

2. Google Open Patent Non-Assertion Pledge

Like Tesla, Google made a similar pledge,[33] by which Google commits to the promotion of innovation and the advancement of information technology. Google considers that Free and Open Source Software is a crucial tool for fostering innovation. Google decided that it would allow the free use of certain of its patents in connection with Free or Open Source Software. It encompasses patents related to encryption technology, middleware, distributive storage management, etc.[34] The promise is addressed to each person or entity developing, distributing or using Free or Open Source Software (pledge recipients): Google commits not to bring any lawsuit or legal proceedings against them.[35] Google, contrary to Tesla, indicated the legal nature of its commitment: the pledge is legally binding, irrevocable and enforceable against Google and entities controlled by Google. In case the pledged patents are transferred, the transferor agrees in writing to comply with the pledge and has the obligation to impose analogous requirement on subsequent transferees.[36]

3. IBM Statement of Non-Assertion of Named Patents Against Open Source Software (OSS)

The IBM pledge is also addressed to the Open Source Community.[37] Like Google's IMB wants to promote innovation and advancement of information technology. Hence, IBM pledged the free use of 500 of its U.S patents as well as all foreign counterparts. As with Google, the pledge recipients are the developers, users and distributors of Open Source Software (OSS).[38] As opposed to the models we described in the first part of this paper, the relation between the "pledgers" and the beneficiaries is more diffuse. Indeed, there are no licensor-licensee relations (not in the traditional sense at least), these pledges are addressed to the public at large.

These types of pledges have confounded lawyers, particularly regarding their enforcement and most importantly regarding the legal category or categories they fit in. The Tesla pledge is a good example of uncertainty surrounding enforcement: What would if Tesla decided to break the promise and sue another company because the use of the patented invention was not according to the "good faith" condition as understood by Tesla? Can companies legitimately rely on the pledge?[39] As to the legal nature of these pledges, lawyers have resorted to legal mechanisms they are familiar with. However, the different legal instruments they analogise these pledges with do not appear to be convincing.

vehicles or related equipment; challenged, helped others challenge, or had a financial stake in any challenge to any Tesla patent; or marketed or sold any knock-off product (e.g., a product created by imitating or copying the design or appearance of a Tesla product or which suggests an association with or endorsement by Tesla) or provided any material assistance to another party doing so". <https//www.teslamotors.com/en_GB/about/legal#patent-pledge>. (accessed 14 April 2017).

33 The Google patent pledge is available at <http//www.google.com/patents/opnpledge/pledge/> (accessed 14 April 2017).

34 For a list of pledged patents, see <http//www.google.com/patents/opnpledge/patents/>(accessed 14 April 2017).

35 "Google promises to each person or entity that develops, distributes or uses Free or Open Source Software that Google will not bring a lawsuit or other legal proceeding against a Pledge Recipient for patent infringement under any Pledged Patents based on the Pledge Recipient's (i) development, manufacture, use, sale, offer for sale, lease, license, exportation, importation or distribution of any Free or Open Source Software, or (ii) internal-only use of Free or Open Source Software, either as obtained by Pledge Recipient or as modified by Pledge Recipient, in standalone form or combined with hardware or with any other software (`Internal-Only Use')". The Google patent pledge is available at <http//www.google.com/patents/opnpledge/pledge/>. (accessed 14 April 2017).

36 Google Pledge: "However, the pledge is made under a condition: the pledge recipients and its affiliates must not assert or profit from the assertion of patents against Google, its affiliates, or its products or services. Google reserves itself the right to terminate the pledge if it deems necessary to protect itself (Defensive Termination). This will concern any Pledge Recipient (or affiliate) who files a lawsuit or other legal proceeding for patent infringement or who has a direct financial interest in such lawsuit or other legal proceeding against Google's". <http//www.google.com/patents/opnpledge/pledge/>. (accessed 14 April 2017).

37 "IBM hereby commits not to assert any of the 500 U.S. patents listed above, as well as all counterparts of these patents issued in other countries against the development, use or distribution of Open Source Software". (2005) IBM Pledge is available at <http//www.ibm.com/ibm/licensing/patents/pledgedpatents.pdf> (accessed 14 April 2017).

38 IBM defines Open Source Software as "any computer software program whose source code is published and available for inspection and use by anyone, and is made available under a license agreement that permits recipients to copy, modify and distribute the program's source code without payment of fees or royalties. All licenses certified by opensource.org and listed on their website as of 01/11/2005 are Open Source Software licenses for the purpose of this pledge".

39 In an interview in February 2015, Musk insisted on the informal aspect of the pledge. Musk: "We actually don't require any formal discussions. So they can just go ahead and use them". Reporter: "Is there a licensing process". Musk: "No. You just use them. Which I think is better because then we don't need to get into any kind of discussions or whatever. So we don't know. I think you'll see it in the cars that come out, should they choose to use them". Interview at <https//www.techdirt.com/articles/20150217/06182930052/elon-musk-clarifies-that-teslas-patents-really-are-free-investor-absolutely-freaks-out.shtml> (accessed 14 April 2017).

B. ENFORCING PATENT PLEDGES

Patent pledges have first been compared to FRAND commitments,[40] yet applying the FRAND framework to patent pledges is appropriate. Indeed, FRAND commitments are mainly concerned with standard essential patents unlike patent pledges they may or may not cover standard essential patents or not. Thus, looking at patent pledges through the lens of the FRAND commitments might not be pertinent. Accordingly, some commentators have tried to use other known legal tools to apprehend patent pledges.

1. Patent Pledges under U.S. Law

Under U.S. Law, various legal mechanisms have been invoked, namely promissory estoppel, implied licenses, laches, and covenants not to sue.

a. Promissory Estoppel

The doctrine of promissory estoppel prevents the promisor from breaking his promise under certain conditions, applying the legal doctrine of estoppel to such pledges, such that they would be enforceable on the promisor. Thus, anyone who uses Tesla's technologies could rely on Tesla's pledges. The same would apply to Google or IBM. The Restatement (Second) of Contracts states that: "A promise which the promisor should reasonably expect to induce action or forbearance on the part of the promisee or a third person and which does induce such action or forbearance is binding if injustice can be avoided only by enforcement of the promise".[41] The pledger makes a promise on which users can rely one; the pledger cannot in this case assert its rights against the user for using the patent license.[42]

b. Implied Licenses

The implied license doctrine can be used as a defence against a patent infringement claim.[43] In De Forest Radio Telephone and Telegraph Co. v. United States, the Supreme Court considered that "any language used by the owner of the patent or any conduct on his part exhibited to another, from which that other may properly infer that the owner consents to his use of the patent in making or using it, or selling it, upon which the other acts, constitutes a license, and a defence to an action for a tort".[44] In the Wang Laboratories, Inc. v. Mitsubishi Electronics, the Court considered that "Although judicially implied licenses are rare under any doctrine, Mitsubishi proved that the "entire course of conduct" between the parties over a six-year period led Mitsubishi to infer consent to manufacture and sell the patented products".[45]

The pledges described above may be considered as an implied license. Indeed, the pledges of the patented inventions by the different companies should be considered as licenses given that the pledger indicated and behaved in a way that inferred consent of the pledger to the use of the patented invention. Therefore, in the event of a patent infringement claim against a beneficiary of the pledge, the latter could use the implied license doctrine as a defence.

c. Covenant Not To Sue

If a patent pledges could be considered as a contract,[46] they may be qualified as covenant not to sue. A covenant not to sue is a promise not to sue for an infringing act.[47] Covenants not to sue are equivalent to a license. As the Court stated in Transcore v. Elec. Trans. Consults,[48] "the difference [between a license and a covenant not to sue] is only one of form,

40 **Contreras**, Patent Pledges, p. 546.

41 American Law Institute (1981), The Restatement (Second) of Contracts, § 2: Promise; Promisor; Promisee; Beneficiary.

42 **Contreras**, Patent Pledges; and **Contreras**, Jorge L. (2015),'A Market Reliance Theory for FRAND Commitments and Other Patent Pledges', Utah L.Rev. V. 2, American University, WCL Research Paper No. 2014-26. <https://ssrn.com/abstract=2309023>. Following the doctrine of promissory estoppel, the reliance aspect might become an issue. Indeed, reliance might be difficult to prove for the beneficiaries of the pledge.

43 **Clark Hughey**, Rachel (2003),'Implied Licenses by Legal Estoppel', Albany Law Journal of Science & Technology', p. 55. <https://litigation-essentials.lexisnexis.com/webcd/app?action=DocumentDisplay&crawlid=1&srctype=smi&srcid=3B15&doctype=cite&docid=14+Alb.+L.J.+Sci.+%26+Tech.+53&key=4d2c0e515d864775efb949d2d357c633>

44 U.S Supreme Court, De Forest Radio Tel. Co. v. United States, 273 U.S. 236, 241 (1927).

45 U.S. Court of Appeals for the Federal Circuit, Wang Laboratories, Inc., Plaintiff-appellant, v. Mitsubishi Electronics America, Inc. 103 F.3d 1571 (Fed. Cir. 1997).

46 American Law Institute (1981), The Restatement (Second) of Contracts, §17 if they meet the requirement under U.S law namely: Consideration, offer, acceptance, mutual assent.

47 American Law Institute (1981), The Restatement (Second) of Contracts, § 285: Contract Not to Sue (1) A contract not to sue is a contract under which the obligee of a duty promises never to sue the obligor or a third person to enforce the duty or not to do so for a limited time. (2) Except as stated in Subsection (3), a contract never to sue discharges the duty and a contract not to sue for a limited time bars an action to enforce the duty during that time. (3) A contract not to sue one co-obligor bars levy of execution on the property of the promisee during the agreed time but does not bar an action or the recovery of judgment against any co-obligor.

48 United States Court of Appeals,Federal Circuit, *Transcore v. Elec. Trans. Consults*., 563 F.3d 1271 (Fed. Cir. 2009): "The inquiry focuses on what the agreement authorizes, not whether the language is couched in terms of a license or a covenant not to sue; effectively the two are equivalent".

not substance - both are properly viewed as authorizations". When looking at the terminology used in pledges like "non-assertion",49 a patent pledge could be interpreted as a covenant not to sue. Thus, a user of the pledged patented inventions could benefit from this type of covenant, and the pledger would be barred from suing for infringement.

d. Laches

Finally the doctrine of laches could be used as a defence in case the pledger sued the beneficiaries of the pledge for infringement.50 In this case, the patent holder is too late in defending its right. As the Court stated in A.C. Aukerman Co. v. R.L. Chaides Constr. Co,51 "In a legal context, laches may be defined as the neglect or delay in bringing suit to remedy an alleged wrong, which taken together with a lapse of time and other circumstances, causes prejudice to the adverse party and operates as an equitable bar". This particular doctrine, although put forward, might no be the most appropriate, since it appears to be more about timing and procedure than the actual substance of the pledge itself.

2. Patent Pledges under French Law

In French law pledges are known as convention de non-opposition (a "non-opposition agreement"). Non-opposition agreements are defined as agreements by which the patent holder commits to not hinder the exploitation of the patented invention.52 Under French law, pledges are not considered as licenses because pledges only contain a negative obligation53 (not to oppose to the exploitation of the patented invention - equivalent to a covenant not to sue in U.S) and no positive obligations such as an obligation to exploit the patented invention,54 therefore the mere pledge not to impede exploitation does not suffice to be considered a as a license. French case law is not of much help in the case of patent pledges. Indeed, the only case where we can find this type of mechanism was a case between only two companies, and not a pledge to the general public. In the Albrycht v. U.C. (Eurotungstene) case, Albrycht had obtained a dominant patent. U.C had patented the improvement on the initial invention and both companies had agreed that Albrycht would not impede the exploitation of the U.C. patent and would provide intellectual cooperation for their use of the patent. U.C. finally decided not to exploit Albrycht's patent. Albrycht sued U.C. for breach of contract considering that U.C. had an obligation to use the patent. U.C. argued that the agreement with Albrycht was not a license and therefore they had no obligation to exploit the patent. The question asked to the Court was to know whether the agreement between Albrycht and U.C. was a license. If the Court had considered the agreement between Albrycht and U.C. to be a license, U.C. would have been in breach of contract (non-exploitation of the licensed patent by the licensee). The Court concluded that the agreement between the two companies was not a license and therefore U.C. had no obligation to exploit Albrycht's patented invention and concluded that the agreement between Albrycht and U.C. was a non-opposition agreement.

In this case the pledge was not addressed to the public at large or to a specific market, but was only between two companies. Although this type of pledge is known in French law, enforceability might take a different shape if the pledge is addressed to the public in general such as the pledges we have described above. The criteria of absence of positive obligations as observed by the French Court in this case would be problematic as well. Indeed, if French law defines a non-opposition convention as only involving negative obligations, one has to remember that the pledges we described above do condition the use of the patented invention that is being pledged. Be it good faith or reciprocal non-assertion commitments, pledge recipients do have obligations. For instance, IBM[55] reserves the right to

49 "Non-assert" is a term found in the OIN, GOOGLE and in the IMB pledges.

50 Patent Commons Project, Understanding Patent Pledges: An Overview of Legal Considerations. <http://www.patentcommons.org/publications/OSDL_Whitepaper_Final_final_4-12-06.pdf> (accessed April 2017).

51 U.S. Court of Appeals for the Federal Circuit, A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020 (Fed. Cir. 1992). The delay is of six years and it is to be noted that this doctrine does not prevent the plaintiff from recovering damages for infringement that took place after he sued the defendant.

52 **Foyer**, Jean/**Vivant**, Michel (1991), Le droit des brevets, Presse Universitaire de France (PUF), p 451.

53 Cour de Cassation, (Cass. Com) Albrycht v. Ugine Carbone (Eurotungstene) 5 January 1983.

54 Under French law the licensee has an obligation to exploit the patented invention that was granted under the license. This has been consistently held by French courts. Cour de Cassation, (Cass. Com), 4 November 1974. Only insurmountable difficulties could justify the non exploitation of the licensed patent. Cour d'appel de Paris, (CA) 13 février 1981.

55 See IBM pledge: "IBM reserves the right to terminate this patent pledge and commitment only with regard to any party who files a lawsuit asserting patents or other intellectual property rights against Open Source Software".

terminate its commitment if any party files a patent infringement lawsuit against open source software. The same condition is found in the Google Pledge.[56] The obligation imposed on users is similar to the obligation the pledgor commits itself to. Hence, the non-opposition convention as understood by French law does not correspond to the patent pledges we have described here.

IV. CONCLUSION

Having recourse to different legal doctrines and tools to apprehend patent pledges shows the originality of these new legal mechanisms since they do not seem to fit perfectly into any of the described tools and doctrines above, unless one operate some legal twist to make them fit into a particular category. Some have advocated for using (under certain conditions) legal tools of contract law and equity,[57] but we argue that there might be a need for a complete new legal tool, a proper patent pledge category standing on its own which would not be just a practise, or an interpretation of a known doctrine, but an actual legal instrument.

Indeed, moving beyond technical consideration such as enforceability of those pledges, one must look at the signal a new legal instrument would send. "Opening up" patents means that patents are used in an unconventional way calling for unconventional legal tools that can shape this "opening up". Referring to known instruments in the case of patent pledges might not fully embrace this particular phenomenon.

All the models presented here have shown the flexibility of patents - they can be used as exclusionary tools or inclusionary tools - and this new understanding of patents as inclusive mechanism might call for new legal tools. This is particularly the case for patent pledges as opposed to the models described in the first part of the paper. Indeed, as we explained these models are similar to patent pools, even if they display particular characteristics, they still operate with formal patent licenses (although "opened"), which are known legal instruments. Although it remains to be seen how such licenses would be enforced, they are instruments lawyers know how to deal with. Open patent licensees form patent pools - groups of licensors and licensees admittedly with licenses with unconventional terms.

However, patent pledges not only question the use of patents as exclusionary tools but also the current legal instruments since they target a bigger crowd than the "patent pools" models and do not make use of traditional licenses. The relation established between the pledgers and the pledge recipients - whomever they may be - need its new legal tool to translate this quite original relation. The models described in this paper do not only disrupt the way we traditionally use patents, but also our apprehension of available legal tools.

56 See Google pledge. "Google conditions its pledge on a defensive termination clause: Accordingly, Google reserves the right to terminate the Pledge, to the extent Google deems necessary to protect itself, its affiliates, or its products and services ("Defensive Termination") with respect to any Pledge Recipient (or affiliate) who files a lawsuit or other legal proceeding for patent infringement or who has a direct financial interest in such lawsuit or other legal proceeding".

57 **Maracke**, Catharina/ **Metzger**, Axel (2016),'Playing Nice with Patents: Do Voluntary Non-Aggression Pledges Provide a Sound Basis for Innovation?' North Carolina Journal of Law & Technology, V 7(3). Art.3. p. 512. <http://ncjolt.org/3978-2/>. (accessed 14 April 2017). In this article the authors advocate for not discarding available legal tools when dealing with patent pledges. if a pledge is a "disguised license" then it should be interpreted as such. In other cases they propose to look at the goals of the pledge and operate a fair balance between the pledgor and the recipient. They also advise to look at parties' motivations.

BIBLIOGRAPHY

Clark Hughey, Rachel (2003), 'Implied Licenses by Legal Estoppel', Albany Law Journal of Science & Technology.

Contreras, Jorge L. (2015), 'Patent Pledges', Arizona State Law Journal, V. 47(3) 543; University of Utah College of Law Research Paper No. 93.

Contreras, Jorge L. (2015), 'A Market Reliance Theory for FRAND Commitments and Other Patent Pledges', Utah L.Rev. V. 2.

Cornish, William (2004), Intellectual Property: Omnipresent, Distracting, Irrelevant?, Clarendon Law Lectures,.

Dussolier, Séverine (2013), The Commons as Reverse Intellectual Property or the Model of Inclusivity: Howe, Helena/ Griffiths, Jonathan (eds.), Concepts of Property in Intellectual Property Law, Cambridge Intellectual Property and Information Law (No. 21), Cambridge University Press.

Dussolier, Séverine (2007), 'Sharing Access to Intellectual Property Through Private Ordering', Chicago-Kent Law Review.

Geiger, Christophe (2013), The Social Function of Intellectual Property Rights, or How Ethics Can Influence the Shape and Use of IP Law': Elgar, Edward/ Dinwoodie, Graeme B. (eds.), Intellectual Property Law: Methods and Perspectives, Cheltenham, UK/Northampton, MA, Max Planck Institute for Intellectual Property & Competition Law Research Paper No. 13-06.

Hayes, David. L./**Schulman,** Eric. C. (2014), An Updated Proposal for a License on Transfer (LOT) Agreement.

Hayes, David. L./ **Schulman,** Eric. C. (2013), A Response to a Proposal for a Defensive Patent License (DPL).

Maggiolino, Mariateresa/ **Montagnani,** M.Lilla (2013), 'Standardized Terms and Conditions for Open Patenting', Minnesota Journal of Law, Science & Technology, , V. 14, pp. 785-816.

Maggiolino, Mariateresa/**Montagnani,** M.Lilla (2011), 'From Open Source Software to Open Patenting: What's New in the Realm of Openness?', International Review of Intellectual Property and Competition Law, V. 42, pp. 804-832.

Maracke, Catharina/ **Metzger**, Axel (2016), 'Playing Nice with Patents: Do Voluntary Non-Aggression Pledges Provide a Sound Basis for Innovation?', North Carolina Journal of Law & Technology, V. 7(3). Art.3.

Pénin, Julien (2011), Le brevet d'invention comme l'instrument de coordination de l'innovation ouverte: Corbel, Pascal/ Le Bas, Christian (eds.), Les nouvelles fonctions du brevet, approches économiques et managériales, Economica

Remiche, Bernard (2002), 'Révolution Technologique, Mondialisation et Droit des Brevets', Revue Internationale de Droit Economique (t. XVI, 1).

Schultz, Jason/ **Urban**, Jennifer (2012), 'Protecting Open Innovation: The Defensive Patent license as a New Approach to Patent Threats, Transaction Costs, and Tactical Disarmament', Harvard Journal of Law and Technology, V. 26(1).

Van Overwalle, Geertrui (2015), Inventing Inclusive Patent: From Old to New Open Innovation: Drahos, Peter/ Ghidini, Gustavo/ Ullrich, Hans (eds.), Essays on Intellectual Property, V. 1, Edward Elgar.

Van Overwalle, Geertrui (ed.) (2009), Gene Patents and Collaborative Licensing Models, Patent Pools, Clearinghouses, Open Source Models and Liability Regimes, Cambridge University Press.

Vivant, Michel (2006), 'Le système des brevets en question: Brevet Innovation et Interêt Général', Larcier (editor) Conference Le Brevet: pourquoi et pourquoi faire? Louvain la Neuve, Belgium.

Vivant, Michel (2005), Droit des Brevets, Edition Dalloz.

Vivant, Michel/ **Foyer**, Jean (1991), Le droit des brevets, Presse Universitaire de France.

Xifaras, Mikhail (2010), 'Copyleft and the Theory of Property', Multitudes 2, No. 41.