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# **TTLF Working Papers**

**No. 19**

**Patent Trolls and Abusive Patent Litigation  
in Europe: What the Unitary Patent Package  
Can Learn From the American Experience?**

**Nicolas Janssens de Bisthoven**

**2013**

# TTLF Working Papers

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## **Abstract**

This paper is a comparative study of the patent trolling phenomenon in the US and the EU in the light of the recent historic parliamentary approval on 11th December 2012 of the European “unitary patent package” (enhanced co-operation). The idea is to study the different patentability systems in the US and EU, to show why and how historically the EU was perhaps more “cautious” than the US, avoiding as such the development of patent trolls in Europe. This thesis will include an explanation on how the situation could change if the new European package comes into effect in 2014 and will try to measure the risk, probability and impact that the reform could have on patent trolls that might emerge in Europe.

In the first and second part, I will review the concept and the theory: the definition of “patent trolls”, its origin, pejorative connotation and trivialization of the concept, characteristics, information asymmetry, legality of patent trolls and similarity with the phenomenon of “submarine patents” present before in the US.

In the third and fourth part, I will make a general overview of the patentability systems in the EU and the US. It will be followed by a comparative study demonstrating the “softer” and “laxer” characteristics of the US system, the reduced obligations of the patentee, the growth of patent acceptances and the problem of low quality patents being granted.

The fifth part will focus on the issue of overvaluation of patents. This phenomenon might cause a bubble similar to the housing price rising before the subprime crisis. There is a significant risk that the price of patents increases while there is a decrease in quality. This part will also cover the potential weaknesses of the American system (possible patentability of software, of business methods, the permissive attitude of the U.S.P.T.O, and excessively high damages granted) leading to a more favorable environment to develop patent trolls.

The last two parts will consider the likelihood of the appearance of such trend (patent trolls) in Europe and how to solve this issue. Given the new European “unitary patent package”, the EU seems to follow the path of the American patent law environment. This will lead to a significant decrease in the costs of patents but will it be an open door to the start of patent trolling in Europe?

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## LIST OF ABBREVIATIONS

AG	Attorney General
AIA	America Invents Act
Art.	Article
CFI	(European) Court of First Instance
EC	European Commission
ECJ	European Court of Justice
EP	European Parliament
EPC	European Patent Convention
EPO	European Patent Office
e.g.	Exempli Gratia (“example given”)
et seq.	and the following
EU	European Union
i.e.	id est (“in effect”)
IP	Intellectual Property
MS	Member States
NPE	Non-Practicing Entities
OJ	Official Journal of the European Union
para.	paragraph
R&D	Research and Development
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
TRIPS	(Agreement on) Trade Related Aspects of Intellectual Property Rights
UPC	Unified Patent Court
US	United States of America
USC	United States Code
USPTO	United States Patent and Trademark Office
WIPO	World Intellectual Property Organization
WTO	World Trade Organization



## Introduction

Patent trolls are relatively unknown to us in Europe. Occasionally a newspaper article<sup>1</sup> mentions the concept, but otherwise very little information is given. The reason is that the phenomenon is, originally, typically American. I have noticed during my visit at Stanford University that most students know directly what I mean when I tell them about my research topic, while in Europe, most people, even some entrepreneurs, have no idea what this topic is about. Nevertheless, as announced only a couple of years ago, “trolls have already crossed the Atlantic”<sup>2</sup>...

The ideal situation in a legally perfect world would be that the patent system protects the original inventor, by according him a temporary and territorial monopoly, in return for making his invention available to society in order to promote research and technical improvements; this is the basic policy philosophy of patent protection. However, this paper will demonstrate that in reality and within our current legal systems, it is still possible to take unfair advantage of the deficiencies of the patent system, with “patent trolls” being the best example.

This study will undeniably be more relevant for the European Union than for the United States, because it will try to analyze what should be changed or added (if needed) to the new European regulations to avoid the harmful appearance of patent trolls within Europe. With regards to the U.S. perspective, this study will only partly examine the question of how to reduce or eradicate this phenomenon there. It will instead try to explain what these trolls are, describe their characteristics, their legal form, the type of patents in which they are interested and why they were able to establish in the U.S. and to gradually reach Europe.

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<sup>1</sup> For example, earlier this month, <http://www.spiegel.de/wirtschaft/unternehmen/telekom-zahlt-hunderte-millionen-euro-an-patent-troll-ipcom-a-909323.html>, (last visited July 20th, 2013)

<sup>2</sup> Annie Kahn, *Les mauvais génies des brevets débarquent en Europe*, Le Monde, Jun. 17, 2008 available at [http://www.lemonde.fr/economie/article/2008/06/17/les-mauvais-genies-des-brevets-debarquent-en-europe\\_1059223\\_3234.html](http://www.lemonde.fr/economie/article/2008/06/17/les-mauvais-genies-des-brevets-debarquent-en-europe_1059223_3234.html) (last visited July 16th, 2013).

# **I. « Patent Trolls » : Terminology and Identification**

Defining clearly what “patent trolls” are is not an easy task. We will see in this section that they can be defined in different ways, and that it is therefore difficult to identify and classify businesses as “patent trolls”.

## **1.1. Etymology**

Originally appearing in Scandinavian fairy tales<sup>3</sup>, “trolls” are defined as “fearsome, ugly, gnome-like creatures that lurked under bridges demanding a toll before the traveler would be allowed to pass”<sup>4</sup> and continue his way. Famous for their appearance in movies like “the hobbit”<sup>5</sup> or Tolkien’s Lord of the ring’s books, the term will, in this paper, be associated as a new conduct in the field of patents.<sup>6</sup>

## **1.2. Origin: the Former “Submarine Patents”**

To understand the philosophy of “patent trolls”, it could be helpful, before delving into the theoretical issue of patent trolling, to look at “submarine patents”, the ancestors of patent trolls:

*Submarine patents<sup>7</sup> are a problem often associated with patent trolls. Submarine patents are patents that are secret until long after the date of invention and long after the market in an area of technology has developed. Under current United States law, publication of a patent application can be delayed until a patent is actually granted if one does not file corresponding foreign patent applications.<sup>8</sup>*

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<sup>3</sup> Brenda Sandburg, *You may not have a choice. Trolling for Dollars*, The Recorder, 30 July 2001.

<sup>4</sup> Carol Robertson, *The little book of movie law*, Chicago: American Bar Association, 2012, p. 11.

<sup>5</sup> Trilogie directed by Peter Jackson.

<sup>6</sup> Alexis Dufourcq, *Patent Troll, un nouveau métier* (Sept. 2006), p. 3.

<sup>7</sup> The most famous example of a submarine patent, ancestor of modern “patent trolls” is probably the 1950s Lemelson barcode system case. (see **Annex 1**, p. 74)

<sup>8</sup> *Patent Trolls : Fact Or Fiction? : Hearing Before the Subcommittee On Courts, the Internet, and Intellectual Property of the Committee On the Judiciary, House of Representatives, One Hundred Ninth Congress, Second Session, June 15, 2006*. Washington: U.S. G.P.O. , 2006.; see also 35 U.S.C. § 122.

In short, as defined by Wikipedia, like a “submarine” that stays under water, a submarine patent is a patent whose issuance and publication are intentionally delayed by the applicant for an extended period of time, such as several years.<sup>9</sup> This practice was possible in the United States until 1995, when the agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of the WTO entered into force, changing the basis of the patent’s term filing date from the “date of issuance” to the “filing date.”<sup>10</sup> The system of using “continuation applications”<sup>11</sup> to enjoy an unpublished term is, as a result, not possible anymore.

These so-called “predecessors”<sup>12</sup> of “patent trolls”, since they arguably also misused the U.S. patent law system, were a typically American phenomenon. It could not have reached the European Union, since the European Patent Convention (EPC), also called Munich Convention, provides in it’s article 93 and 123, §§ 2 and 3:

*The European Patent Office shall publish the European patent application as soon as possible: (a) after the expiry of a period of eighteen months from the date of filing or, if priority has been claimed, from the date of priority, or (b) at the request of the applicant, before the expiry of that period. (art. 93 §1 EPC)*

*The European patent application or European patent may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed.*

*The European patent may not be amended in such a way as to extend the protection it confers. (art. 123 §§ 2 and 3 EPC)*

This stricter European framework of “priority” and “continuation applications” prevented the applicants from taking the opportunity to extend protection, through

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<sup>9</sup> Wikipedia, [http://en.wikipedia.org/wiki/Submarine\\_patent](http://en.wikipedia.org/wiki/Submarine_patent), (last visited July 16th, 2013)

<sup>10</sup> See especially art. 29.1 and 33 TRIPS : [http://www.wto.org/english/tratop\\_e/trips\\_e/t\\_agm0\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm), (last visited July 16th, 2013)

<sup>11</sup> Joe Brennan, *Patent trolls in the U.S., Japan, Taiwan and Europe*, Tokugikon. 2007.1.30, n° 244 , p. 75; available at: <http://www.tokugikon.jp/gikonshi/244kiko1e.pdf>, (last visited July 29th, 2013)

<sup>12</sup> *Id.*

amendments, beyond the content of the original application. This is arguably the reason why this “first generation” of patent trolls did not harm Europe and was thus an almost exclusively American issue.

### **1.3. Definition Attempt**

The first definition of a “patent troll” was given by the author of this concept, Peter Detkin, former lawyer and assistant general counsel at Intel Corporation, a famous U.S. chip manufacturer. After having been sued for libel for calling another company a patent “extortionist,” he came up with the concept of “patent trolls.” He defines them as “somebody who tries to make a lot of money off a patent that they are not practicing and have no intention of practicing and in most cases never practiced.”<sup>13</sup> The business strategy of these “trolls” is atypical:

*Instead of actively moving to make use of their inventions by developing them themselves or by licensing others to develop them, they let their patents sit unused. As time passes, they monitor commerce with an eye toward parties who may be using the patented inventions in various products. When they find such use, the trolls contact the users and demand payment of license fees as compensation for permission to make use of the protected inventions. If the contacted parties refuse to pay, the trolls may choose to go to court to enforce their patent.*<sup>14</sup>

Because of these arguably controversial practices and business model, patent trolls are nowadays highly criticized. The term is used in a very broad sense: everyone who tries to enforce his patent protection could be regarded as a “patent troll.” The term is

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<sup>13</sup> Brenda Sandburg, *supra* at 1.

<sup>14</sup> Jeffrey H. Matsuura, *Jefferson Vs. the Patent Trolls: a Populist Vision of Intellectual Property Rights.*, Charlottesville: University of Virginia Press, 2008, p. 101.

highly trivialized these days, to the extent that it's unclear as to what exactly it covers.<sup>15</sup>

The popularity of this expression seems to have caused it to divert from its original definition.

However, even if no significant agreement is found on a common definition of “patent trolls,” since there are multiple variants, the majority agrees that this concept, once used, is meant “pejoratively.” Recently for instance, in February 2013, President Barack Obama had harsh words to say about patent trolls, stating that patent trolls are “essentially trying to leverage and hijack somebody else’s idea and see if they can extort some money out of them.”<sup>16</sup> He also called them “extortionists” and announced that measures will be taken against “trolls” so that startups have incentives to keep innovating.

Other terms also exist to define “patent trolls”; various terms such as “patent pirate,” “patent extortionist,” “patent parasite” or “patent speculator”<sup>17</sup> also have this negative connotation. Other terms are more neutral, such as “patent licensing company” or “non-practicing entity (NPE)”. The term NPE usually refers to “a patentee that does not make products or “practice” its inventions.”<sup>18</sup> Here again, it is difficult to find a clear and common definition; the definition has therefore been “narrowed to exclude actors in the innovation enterprise who engage in significant research and development activities”<sup>19</sup> and “individual inventors who seek to commercialize their inventions.”<sup>20</sup> In our eyes, the use of the term NPE should prevail, since it better targets the kind of

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<sup>15</sup> Alexis Dufourcq, *supra* at 4.

<sup>16</sup> Business Insider website : <http://www.businessinsider.com/obamas-patent-comments-at-google-chat-2013-2> (last visited July 16th, 2013)

<sup>17</sup> Joe Brennan, *supra* at 76.

<sup>18</sup> Colleen Chien, *Of trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-tech Patents*, in M. A. Lemley, *Symposium: Frontiers In Empirical Patent Law Scholarship* (North Carolina Law Review Association 2009), pp. 1577-1578.

<sup>19</sup> Although being “Non-Practicing entities” according to the definition, Universities for instance or other research companies are not considered to be “patent trolls”; Mark. A. Lemley, *Are Universities Patent Trolls?* (April 11, 2007). *Fordham Intellectual Property, Media & Entertainment Law Journal*, Vol. 18, p. 611, 2008; Stanford Public Law Working Paper No. 980776. Available at SSRN: <http://ssrn.com/abstract=980776>, (last visited July 17th, 2013)

<sup>20</sup> Colleen Chien, *supra* at 1578.

entities that we wish to study in this paper and limits the scope of the definition to those whose primary business purpose is to extort licensing fees. In other words, this research focuses on “abusive” patent trolls.

An interesting anecdote to conclude this section is the fact that Peter Detkin in 2002 left Intel Corporation and established his own Intellectual Ventures Company.<sup>21</sup> What is funny to notice in the next table is that this company is listed in 2013 as the “NPE” with the largest patent holdings. It seems that, after being himself a fighter of patent trolls at Intel corporation, and himself coining the famous term “patent trolls,” Detkin has surprisingly changed sides and created one of them. Though, he would probably not use this term to describe his own company.

### **NPEs with Largest Patent Holdings<sup>22</sup>**

<b>Entity</b>	<b>US Patent Publications</b>	<b>Patent Families</b>
Intellectual Ventures	20-25k (Est)	-
Round Rock Research LLC	3510	1232
Rockstar Consortium LLC	3399	2842
Interdigital	2961	1522
Wisconsin Alumni Research Foundation (WARF)	2349	1741
Mosaid Technologies Inc	1996	1199
Rambus	1629	725
Tessera Technologies Inc	1332	675
Acacia Technologies	1238	496
IPG Healthcare 501 Limited	1096	1031
Walker Digital LLC	892	221

<sup>21</sup> Official website : <http://www.intellectualventures.com/>, (last visited July 16th, 2013)

<sup>22</sup> Available at <https://www.patentfreedom.com/about-npes/holdings/>, (last visited July 16th, 2013): the companies listed are good examples of identified modern patent trolls.

Entity	US Patent Publications	Patent Families
Wi-Lan	838	657
Global OLED Technology LLC	802	752
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	740	579
Scenera Research LLC	413	323
STC.UNM (aka Science & Technology Corporation @ UNM)	410	292
Intertrust Technologies Corp	323	47
Altitude Capital Partners	302	236
Innovative Sonic Ltd	253	181
Interval Licensing LLC	237	119
IpVenture Inc	208	63
Pendrell Corp (fka ICO Global Communications (Holdings) Ltd)	206	35
Cheetah Omni LLC	200	121
Alliacense	198	112
Illinois Computer Research (and other entities owned by James Parker et al)	197	120

Source: PatentFreedom © 2013. Data captured as of January 18, 2013.

#### 1.4. A concrete Illustration: the BlackBerry-case<sup>23</sup>

In 2001, an important case opposed a ‘patent troll’, Network Technology Products Inc. (NTP), against the well-known company Research In Motion Ltd. (RIM), renamed BlackBerry since 30 January 2013. In this case, NTP claimed that RIM’s email retrieving system was infringing upon a number of its patents. At first, the Federal District Court of Eastern Virginia awarded NTP damages and a permanent injunction<sup>24</sup>

<sup>23</sup> Case available at <http://caselaw.findlaw.com/us-federal-circuit/1308435.html>, (last visited July 17th, 2013)

<sup>24</sup> See section 6.3. (2) (c) of this paper, pp. 58-59, on the eBay Inc. v. MercExchange –case, illustrating that a permanent injunction is nowadays not automatically granted to patent trolls.

against RIM.<sup>25</sup> Later, the Fourth Circuit Court of Appeals vacated in part this judgment, since some alleged infringements concerned patents “that ‘should not have been granted at first hand’ according to the US Patent and Trademark Office.”<sup>26</sup> The parties decided to settle the case for \$612.5 million as RIM had no real other option.

It is since this case, among others, that economic players have realized the power of nuisance that patent trolls can have and have declared war on them, lest they would jeopardize any future innovations by these players<sup>27</sup>.

## **1.5. Rationale of Their Merits**

It seems clear that non-practicing entities are highly criticized by a lot of doctrine writers and that the use of the term “patent troll” is usually pejorative. However, some authors try to justify the pertinence and need of such a businesses in the economy:

*While large companies continue to thrive on pervasive technological advancements, small inventors have been limited by their inability to exploit their patents. Patent portfolio licensing created a pioneering way to increase the utility of patents; however, in practice this business model has typically favored powerful players in the technology industry. A new market has emerged based on innovative business models which favor small inventors. This market seeks to aggregate and distribute patents to companies that infringe on intellectual property or that want to draw on it as a source. By matching patent owners with patent users, this market may enable small inventors to have a greater stake in their technological efforts.*<sup>28</sup>

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<sup>25</sup>James F. McDonough, *The Myth of the Patent Troll: An Alternative View of the Function of Patent Dealers in an Idea Economy*, Emory Law Journal, Vol. 56, 2006, pp. 194-195.; Joe Brennan, *supra* at 74.

<sup>26</sup>Bruno Van Pottelsberghe de la Potterie, *The Quality Factor in Patent Systems*, ECARES, Working Paper 2010-027, July 2010, p. 10; see also section 4.2. of this paper, p. 37 et seq., on low quality patents.

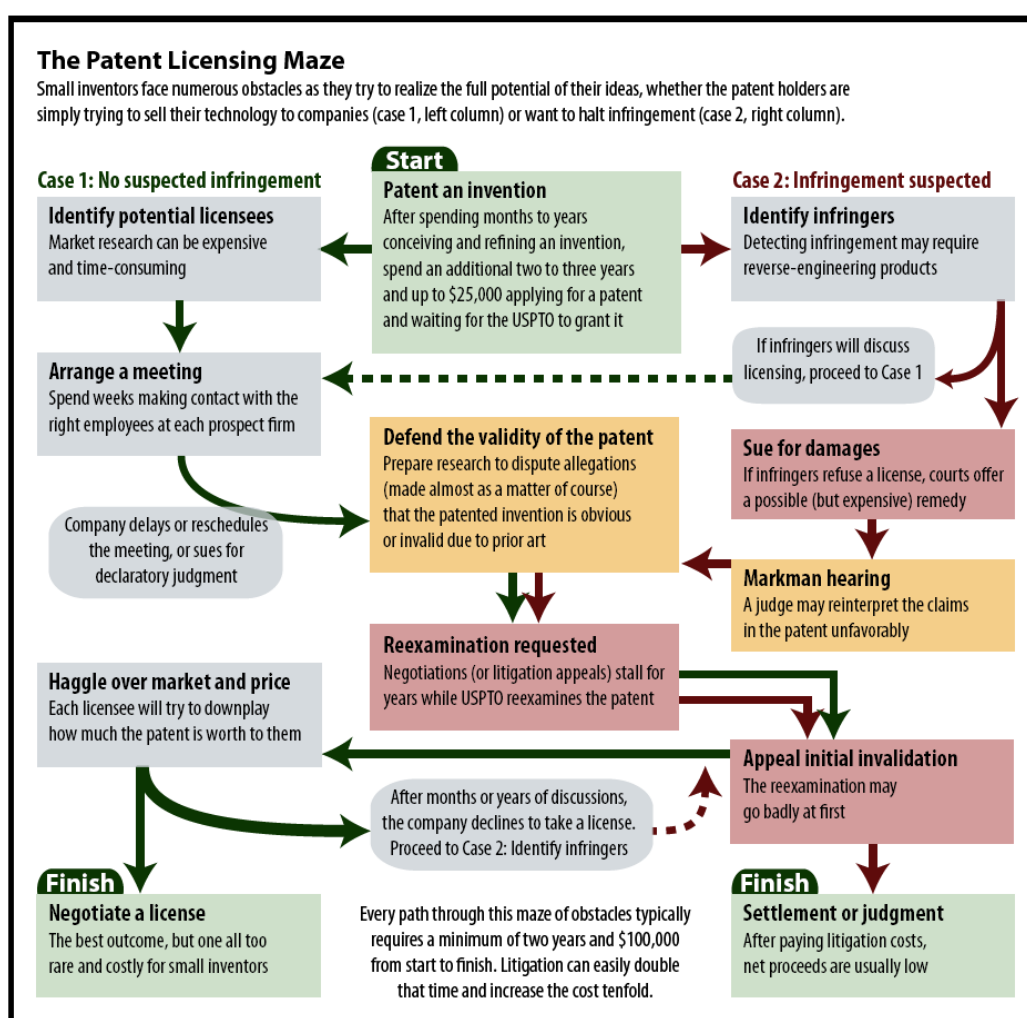
<sup>27</sup>Marie Mustin, *Patent Trolls: la traversée de l'Atlantique*, thesis supervisor Prof. B. REMICHE, Université Catholique de Louvain, 2009-2010, p. 16.

<sup>28</sup>Peter N. Detkin, *Leveling the Patent Playing Field*, 6 J. MARSHALL REV. INTELL. PROP. L. 636 (2007), p. 635.



Patent trolls seem to be helpful intermediaries between small inventors and big companies wishing to use these inventions, and their purpose seems, therefore, most laudable. They enhance inventions that otherwise would fall into disuse or be used without their inventor being notified and paid.<sup>29</sup>

Therefore, rather than defining themselves as “patent trolls,” non practicing entities define themselves as “patent angels,”<sup>30</sup> since they arguably restore balance to the patent system and provide a good alternative for small inventors who face difficulties, regarding the complex patent licensing system (see table below<sup>31</sup>), to realize the full potential of their ideas.



<sup>29</sup> Annie Kahn, *supra* at [http://www.lemonde.fr/economie/article/2008/06/17/les-mauvais-genies-des-brevets-debarquent-en-europe\\_1059223\\_3234.html](http://www.lemonde.fr/economie/article/2008/06/17/les-mauvais-genies-des-brevets-debarquent-en-europe_1059223_3234.html), (last visited July 16th, 2013)

<sup>30</sup> Marie-Gabrielle Plasseraud, *Les patent trolls, mauvais génies du monde des brevets*, Institut de Recherche en Propriété Intellectuelle, April 2008, p. 3 ; John H. Johnson et al., *Don't Feed The Trolls*, Les Nouvelles, Sept. 2007, p. 489.

<sup>31</sup> Peter N. Detkin, *supra* at 638.

Nonetheless, we will examine later in this paper<sup>32</sup> why, although the original *prima facie* purpose of patent trolls seems attractive and commendable, it is important for the European Union to take measures to try to limit the establishment of “abusive” patent trolls (with big patent portfolios) on its territory in the future.

## **II. Characteristics, Strategy, Legal Forms and Legality**

### **2.1. Legal Form and Traditional Goal: Using Patents as “Hunting Licenses”**

Used as a verb, patent “trolling” is employed to describe “the action of hunting down and acquiring unused patents to enforce against any company using similar technology to the patent.”<sup>33</sup> This is basically what patent trolls do. However, we must distinguish, depending on their legal form, different categories of so-called “patent trolls.” Not all patent plaintiffs should fall into the scope of this definition.

2.1.1. The Individual Inventors and the Innovation Enterprises Engaged in Research and Development (R&D).

Despite sometimes acting similarly to patent trolls, these actors should not<sup>34</sup> be categorized as one. Individual inventors and research companies could be classified as non-practicing entities when they develop technologies that can be used by producers and try to license their inventions to them. But there is a major difference, as regards the purpose, with pure “patent trolls” that acquire patents purely to extract royalties. Demonstrating this difference by analogizing the patent to a piece of land makes this directly clear:

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<sup>32</sup> See Chapter 7 of this paper on “remedies”.

<sup>33</sup> Jennifer Kahalelio Gregory, *The Troll Next Door*, 6 J. MARSHALL REV. INTELL. PROP. L. 292 (2007), pp. 292-293.

<sup>34</sup> V. Rajkumar, *The Effect of Patent Trolls on Innovation: A Multi-Jurisdictional Analysis*, Indian Journal of Intellectual Property Law, 2008, vol. 1, p. 33.

*Both the innovator and the patent troll can potentially own the land, thus having the right to exclude others from it. The innovator, however, uses the land to raise a crop but a patent troll merely aims at excluding people from the land. The crop has a value that is independent of the existence of ownership rights in the land.*<sup>35</sup>

### 2.1.2. Producers

Traditional companies, which provide goods and services on the market, also try to defend their own inventions against others. Although they occasionally acquire patents as part of a “defensive or offensive strategy”<sup>36</sup> related to their product line, they should also not be called “patent trolls”, as they themselves are still participating and practicing in the market.

These first two categories can be seen to be legitimate actors on the market.

### 2.1.3. The “Pure” Patent Troll

These are the entities that especially interest us in this paper and that we can consider as “pure” and “harmful” patent trolls. These patent trolls come in various forms:

*First, they could be the companies who purchase controversial patents for purpose of asserting them against industry (...). Second, patent trolls could be a company that originally sold products, but has either completely or largely closed their operation (...). Further, patent trolls could be the agents that assert patent on behalf of patent owners (...). Lastly, patent trolls could be the form of Law firms.*<sup>37</sup>

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<sup>35</sup> *Id.*; see also Jason Rantanen, *Slaying the Troll: Litigation as an Effective Strategy against Patent Threats*, 23 Santa Clara Computer & High Tech. L.J. 159 (2006), p. 169, Available at: <http://digitalcommons.law.scu.edu/chtlj/vol23/iss1/5>, (last visited July 16th, 2013)

<sup>36</sup> *Id.*, p. 34.

<sup>37</sup> Joe Brennan, *supra* at 76.

Concrete examples of this kind of “troll” can be found within the abovementioned table of the NPEs with the largest patent holdings.<sup>38</sup> The use of the term of “patent trolls” in this paper will, from now on, only refer to this “pure” category of NPEs.

## 2.2. Characteristics of a Patent Troll

Pure patent trolls can be characterized by 4 elements. Such a troll:

- (1) *Has no significant assets except patents*
- (2) *Produces no products*
- (3) *Has attorneys as its most important employees, and*
- (4) *Acquires patents, but does not invent technology itself.*<sup>39</sup>

It’s important to understand that these entities do not make any investments in Research and Development (R&D), nor work on the product or practice of the patents they hold, rather they make essentially frivolous<sup>40</sup> claims of infringement. They want a “glittering pot of gold in exchange for doing absolutely nothing.”<sup>41</sup> As a consequence of these characteristics, their business model is completely different to that of other market players.

## 2.3. Strategy: an Atypical *Modus Operandi*<sup>42</sup>

The business model of a patent troll is to engage in patent “holdup”<sup>43</sup>: the game consists of “hiding the ball, waiting until people have developed an industry, and then

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<sup>38</sup> See section 1.3. of this paper, p. 12.

<sup>39</sup> *Patent Trolls : Fact Or Fiction? : Hearing Before the Subcommittee On Courts, the Internet, and Intellectual Property of the Committee On the Judiciary, House of Representatives, One Hundred Ninth Congress, Second Session, June 15, 2006.* Washington: U.S. G.P.O., 2006, p. 8.

<sup>40</sup> Jennifer Kahalelio Gregory, *supra* at 299.

<sup>41</sup> Brenda Sandburg, *supra* at 1.

<sup>42</sup> V. Rajkumar, *supra* at 34.

<sup>43</sup> Carl Shapiro, *Injunctions, Hold-Up, and Patent Royalties* (Competition Policy Ctr. Working Paper), University of California at Berkeley, 2006, p. 1, *available at*

popping up and demanding a disproportionate share of royalties based on irreversible investments.”<sup>44</sup>

The main activity is thus to "enhance" the patents at the expense of various operators identified as infringers, forcing them to pay high license fees under the threat of potentially expensive litigation.<sup>45</sup> They speculate on the potential value of patents, attempt to acquire them cheaply from individual inventors, then bankrupt companies or small businesses, which do not have the capacity and legal experience to protect and enforce their patent rights effectively. Trolls don't practice their patents, they "assert"<sup>46</sup> them.

Moreover, in 2001, the economic crisis that followed the bursting of the dot-com bubble<sup>47</sup> worsened the situation allowing for the repurchase of many patents of distressed companies at low prices. Patent trolls took advantage of this opportunity to build up even larger patent portfolios. Based on these patents, they could threaten even more companies that allegedly infringed upon their technologies.

The victims of patent trolls come in all sizes and exist in many industries. Usually, the targeted entities are already "mature" companies, as the table below of the most pursued companies attests.

### Ranking of Operating Companies by Number of NPE Lawsuits<sup>48</sup>

No.	Company Name	2008	2009	2010	2011	2012	Total
1	Apple	18	26	34	43	44	165
2	Hewlett Packard	27	27	36	34	19	143

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<http://faculty.haas.berkeley.edu/shapiro/royalties.pdf>, (last visited July 17th, 2013) ; also Mark A. Lemley, *supra* at 531.

<sup>44</sup> Mark A. Lemley, *supra* at 543.

<sup>45</sup> Charles Descazeaux, *Contre les attaques de "patent trolls", l'union fait la force*, Schmit-Chrétien, Brèves March-Avril 2009, p. 1.

<sup>46</sup> Richard Posner, *Patent Trolls*, available at <http://www.becker-posner-blog.com/2013/07/patent-trollsposner.html>, (last visited July 23rd, 2013)

<sup>47</sup> Also known as the « information technology » or « internet » bubble.

<sup>48</sup> Available at <https://www.patentfreedom.com/about-npes/pursued/>, (last visited July 17th, 2013)

No.	Company Name	2008	2009	2010	2011	2012	Total
3	Samsung	12	10	21	43	37	123
4	Dell	8	28	23	36	19	114
5	Sony	13	22	20	32	22	109
6	AT&T	17	16	22	31	22	108
7	HTC	15	11	23	31	23	103
8	LG	13	10	23	29	24	99
9	Microsoft	16	22	12	30	16	96
10	Amazon.com	5	13	20	35	20	93
11	Verizon	13	13	17	25	24	92
12	Google	10	16	10	30	22	88
13	BlackBerry	15	11	13	28	20	87
14	Nokia	13	14	14	24	10	75
15	Panasonic	12	20	12	19	10	73
16	Toshiba	8	15	12	21	15	71
17	Sprint Nextel	12	14	8	18	15	67
18	Motorola Solutions	17	12	17	10	9	65
19	Cisco	9	13	15	16	8	61
20	Motorola Mobility		2	8	31	18	59
21	Asus Computer International	11	9	5	19	11	55
22	Acer	11	10	7	11	15	54
23	Sony Ericsson	7	9	11	20	6	53
24	Best Buy	4	12	13	17	6	52
24	Intel	10	15	14	5	8	52
26	Deutsche Telekom	9	10	9	16	7	51
26	Wal-Mart	7	5	12	16	11	51

No.	Company Name	2008	2009	2010	2011	2012	Total
28	Kyocera	8	7	10	13	10	48
29	eBay	4	7	9	15	12	47
29	IBM	4	13	12	10	8	47

Source: PatentFreedom © 2013. Data captured as of January 18, 2013.

The targets of patents trolls are often confronted with a sort of “cornelian dilemma”: either to accept a license agreement and consequently to pay license fees, or to refuse this situation, risking then to face a lawsuit resulting in potential treble<sup>49</sup> damages and a permanent injunction. Since patent trolls are rarely interested in “litigating for the sake of litigating,”<sup>50</sup> their aggressive attitude can be very harmful to their targets. The targets, therefore, often prefer to opt for settlement of the case “amicably” in order to avoid lengthy and costly trials:

*An important factor behind the patent troll strategy is the assumption that parties who have already incorporated the patented technology into successful commercial products will take whatever action is necessary to ensure that they can continue to market their product. (...) Litigation is not the desired outcome for the trolls.<sup>51</sup>*

In fact, the threat of trial by patent trolls represents an excessive financial risk: “there’s no guarantee they’ll win, and an injunction to stop a company from manufacturing an infringing product would create the financial equivalent of nuclear winter.”<sup>52</sup> As the stakes are asymmetric, the balance of power between the parties is disproportionate thus, submission<sup>53</sup> to the patent troll is generally complete.

<sup>49</sup> Brad D. Krueger, *Pulling trolls out from under the bridge: Proposed Patent Reforms*, Germeshausen Center Newsletter (Franklin Pierce Law Center, Concord, N.H.), 2005, p. 4, available at <http://www.csrmedia.com/assets/Germ05S.pdf>, (last visited July 17th, 2013).

<sup>50</sup> Jason Rantanen, *supra* at 160.

<sup>51</sup> Jeffrey H. Matsuura, *supra* at 101.

<sup>52</sup> Brenda Sandburg, *supra* at 1.

<sup>53</sup> Marie Mustin, *supra* at 19.

A remarkable factor is that patent trolls, instead of trying to avoid infringements, prefer to provoke them: they “simply wait for others to infringe upon them.”<sup>54</sup> Furthermore, unlike other enterprises, a patent troll can devote himself entirely<sup>55</sup> to his activities of trolling, as this is his business plan, and they can be more aggressive, as they don’t fear counterclaims because they don’t practice their patents or produce anything that could infringe any patents.<sup>56</sup>

The only risk they face is that the presumed infringed patents are invalidated. Therefore, besides the risk of losing some patents from their portfolio, they have almost nothing to lose, and this provides serious intimidation power against companies that think they might not be violating their patents.

The bargaining power of patent trolls is so strong that they “typically target multiple defendants.”<sup>57</sup> This demonstrates how, because of *inter alia* information asymmetry,<sup>58</sup> misbalanced the system is:

*Litigation is a weapon that resides primarily in the hands of the patentee, and can be used to force a settlement price that the infringer must accept.*<sup>59</sup>

*A contrario*, some authors list reasons for the targets of patent trolls to believe that they possess a little more bargaining power than is initially apparent:

*Litigation also has negative effects on the patentee. One such effect is the cost of the litigation itself, something that may drive down the patent troll's settlement price. More importantly, however, is the fact that through litigation, an infringer places the patent troll's most important asset - its patent - at risk. Professors Farrell and Merges have demonstrated that the possibility of losing its patent*

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<sup>54</sup> Jeffrey H. Matsuura, *supra* at 101.

<sup>55</sup> Alexis Dufourcq, *supra* at 6.

<sup>56</sup> Marie Mustin, *supra* at 19.

<sup>57</sup> Colleen Chien, *supra* at 1579.

<sup>58</sup> See also section 2.4. of this paper on “information asymmetry”.

<sup>59</sup> Jason Rantanen, *supra* at 161.



*greatly incentivizes a patentee to win litigation This is especially true when the patentee is a troll, whose only asset is its patent. By litigating, an infringer places this value at issue, forcing it to affect the troll's settlement price. These factors demonstrate that litigation can be a powerful tool in the hand of an infringer, who can use that threat to force a lower (or zero) value settlement price.*<sup>60</sup>

Even though there could be reasons for targets to consider themselves on an equal footing in trials with patent trolls, their methods remain nonetheless petty and the claims of the troll must be taken seriously. Patent trolls are the “game masters.” That’s why, when in doubt, targets generally prefer to pay a license fee at high prices, rather than risk being forced to interrupt their entire production chain.

#### **2.4. A Degree of “Information Asymmetry” Over the Average**

Another relevant facet of patent trolls is their secret, or at least discrete, nature. In a lot of cases, there is an obvious information asymmetry issue. Indeed, these trolls can gather all sorts of information about their targets, since it will most often be large well known companies with deep pockets<sup>61</sup> while, on the other hand, the companies targeted by the patent trolls know relatively little about their professional "blackmailers."<sup>62</sup> It is difficult for them to be able to collect reliable information.<sup>63</sup>

Some companies, such as PatentFreedom,<sup>64</sup> try to offset this information asymmetry by helping, in return for payment, companies to identify and to better understand patent

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<sup>60</sup> *Id.*; See also, e.g., Joseph Farrell & Robert P. Merges, *Incentives to Challenge and Defend Patents: Why Litigation Won't Reliably Fix Patent Office Errors and Why Administrative patent Review Might Help*, 19 BERKELEY TECH. L.J. 943 (2004), p. 952.

<sup>61</sup> Stephany Legrand, *eBay v. MercExchange: On Patrol for Trolls*, Houston Law Review, 2007, p. 1187, [http://www.houstonlawreview.org/archive/downloads/44-4\\_pdf/9\\_Legrand.pdf](http://www.houstonlawreview.org/archive/downloads/44-4_pdf/9_Legrand.pdf), (last visited July 17th, 2013)

<sup>62</sup> Gary Shapiro, *Beware the patent troll: innovators need protection from legal leeches*, <http://www.washingtontimes.com/news/2013/apr/16/beware-the-patent-trolls/>, (last visited July 17th, 2013)

<sup>63</sup> Marie Mustin, *supra* at 24.

<sup>64</sup> Official website : <https://www.patentfreedom.com/>, (last visited July 17th, 2013)

troll's behaviors. Others<sup>65</sup> try to collect “abusive” patent litigation letters so to educate better people about the potential threat. This can be helpful information for companies planning to refuse the license offer and want to prepare their defense before going to trial.

## 2.5. Legality of Patent Trolls

The activity of buying patents for the purpose of speculation is not reprehensible in itself. Patent trolling is, therefore, in most situations, not illegal: in the actual European and American patent systems, it is not necessary that the patent holder is the inventor of the creation in question; nor is it required that they exploit the patent in order to be allowed to defend it.<sup>66</sup>

Although ethically questionable, the activities of patent trolls are thus not unlawful. When holding after purchase a patent, and therefore the corresponding title, they also obtain all the exclusive rights granted to the original patentee. They can, therefore, for a limited term, dispose of their patents as they see fit: including the right to exclude others, to raise revenue by licensing, to limit unlicensed exploitation, etc... They also e.g. have the right to resell the patent.

The central purpose of patent law was to grant the individual patent owner a reasonable period to make economic benefits:

*The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in ‘Science and useful Arts’”.*<sup>67</sup>

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<sup>65</sup> e.g. <https://trollingeffects.org/>, (last visited July 17th, 2013)

<sup>66</sup> Marie-Gabrielle Plasseraud, *supra* at 2.

<sup>67</sup> Amy L. Landers, *Understanding Patent Law*. [2nd ed.] New Providence, NJ: LexisNexis, 2012, p. 15.

The opinion on the suitability, or not, of “aggressive” patent trolls seems therefore to be more of an “ethical,”<sup>68</sup> rather than a “legal” issue. Nonetheless, the purchase of patents for the sole purpose of valorizing them goes clearly against the original purpose of the legislators. Misusing the system and causing harm<sup>69</sup> to their targets, “a number of debates about patent reform and policy have centered on a debate about”<sup>70</sup> “trolling”. Despite the legality of their action, means should definitely be found to counter the “abusive” elements of their practice.

### **III. Systems of Patentability on the New and the Old**

#### **Continent.**

##### **3.1. Patentability in the United States**

###### **3.1.1. Conditions**

Article I, section 8, clause 8 of the American Constitution is the constitutional grant for all intellectual property law, and is therefore the legal basis of patent law.

On September 16, 2011 a big reform of the American patent system was provided in the Leahy-Smith America Invents Act (AIA).<sup>71</sup> It imposed “the most sweeping changes<sup>72</sup> to the U.S. patent law in nearly 60 years.”<sup>73</sup> Changes were also brought with regards to the United States Code’s (USC) sections relating to the conditions of patentability.<sup>74</sup>

The conditions in the US to patent an invention are: (1) an invention (patent-eligible subject matter), (2) novelty, (3) non-obviousness and (4) utility.

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<sup>68</sup> See also section 6.4. of this paper, p. 61, for the advantages of patent trolls.

<sup>69</sup> Amy L. Landers, *supra* at 16.

<sup>70</sup> *Id.*

<sup>71</sup> *Leahy-Smith America Invents Act*, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.).

<sup>72</sup> A major change, was moving from a “first to invent” system to a “first inventor to file” (see **Annex 2**, p. 75)

<sup>73</sup> *The New United States Patent Law*. Black line ed. Harvard, Mass: LegalPub.com, Inc., 2011, p. 7.

<sup>74</sup> Title 35 USC, §§ 1 and seq.; Chapter 10 concerns specifically patentability of inventions.

(1) An Invention:

As provided by § 101 of Title 35 of the USC

*Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.*<sup>75</sup>

“Inventions” can thus be patented; these are creations of things that do not exist yet. In short, we could say that inventions are “technical solutions to a technical problem with technical means of repetition.”<sup>76</sup> In the United States, this concept is very large:

*By definition, an invention is subject matter<sup>77</sup> that is conceived and reduced to practice. Pfaff v. Wells Electronics, Inc. emphasized that the main act of inventing is the conception part: “The primary meaning of the word ‘invention’ in the Patent Act unquestionably refers to the inventor’s conception rather than to a physical embodiment of that idea.” Reduction to practice, however, shows that the invention and testing is completed (e.g. that the thinking part is done).*<sup>78</sup>

As the Supreme Court affirmed, it’s possible to patent “anything under the sun that is made by man”<sup>79</sup>: it’s intended to be very broad, perhaps even too broad. There are four categories of patent-eligible subject matter defined in the United States Code: Processes, machines, manufactures and compositions of matter.<sup>80</sup>

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<sup>75</sup> *The New United States Patent Law*. Black line ed. Harvard, Mass: LegalPub.com, Inc., 2011, p. 39.

<sup>76</sup> Jean-Marc Mousseron, *Traité des brevets*, Paris, Litec, 1984, p. 175, n° 154.

<sup>77</sup> See next paragraph for a better understanding of this concept.

<sup>78</sup> Eric M. Dobrusin & Ronald A Krasnow, *Intellectual Property Culture: Strategies to Foster Successful Patent and Trade Secret Practices In Everyday Business* (2nd ed. 2012), p. 311.

<sup>79</sup> Carol M. Nielsen and Michael R. Samardzija, *Compulsory Patent Licensing: Is It a Viable Solution in the United States?*, 13 Mich. Telecomm. Tech. L. Rev. 509 (2007), p. 515; available at

<http://www.mttr.org/volthirteen/nielsen&samardzija.pdf>, (last visited July 20th, 2013); *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

<sup>80</sup> See Title 35 U.S.C. § 101.

Nevertheless, U.S. patent law added that a claim must not fall in “one of the three judicially created exceptions: laws of nature, natural phenomena and abstract ideas.”<sup>81</sup> Not every invention is thus patentable. To be patented in the U.S., an invention must fall within the four categories and outside the exceptions.<sup>82</sup>

(2) Novelty:

Since the recent America Invents Act, this article was completely modified. The rule in the United States is now that:

*A person shall be entitled to a patent unless (1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention; or (2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.*<sup>83</sup>

A patent must thus be new or novel: no one else can have come up with the same invention before; i.e., no single other reference has all the elements of the claim.<sup>84</sup> Confidentiality agreements, and the precise methodic way of drafting patent claims, are therefore crucial.

(3) Non-Obviousness<sup>85</sup>

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<sup>81</sup>Charles R. Macedo, *The Corporate Insider's Guide to U.S. Patent Practice*, Oxford: Oxford University Press, 2010, p. 25.

<sup>82</sup> *What Is a Patent?*, Chicago, Ill.: ABA Section of Intellectual Property Law, 2006, p. 11.

<sup>83</sup> Title 35 U.S.C. § 102 (a); *The New United States Patent Law*. Black line ed. Harvard, Mass: LegalPub.com, Inc., 2011, p. 40; see also §102(b) for exceptions of this principle.

<sup>84</sup> Charles R. Macedo, *supra* at 17.

<sup>85</sup> Paul M. Rivard and Allen Gardner, *Patent Obviousness In the Wake of Ksr International Co. V. Teleflex Inc.* Chicago: American Bar Association, Section of Intellectual Property Law, 2010.

Title 35, § 103, of the United States Code establishes this third requirement. This Section was also completely modified, in 2011, by the America Invents Act:

*A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.*<sup>86</sup>

Some inventions don't deserve to be patentable and to enjoy the accorded rights. A test must be passed before the governmental grant of an exploitation monopoly; there must be some innovation and a mere novelty is insufficient:

*Something more has been required, and specifically some determination that the innovation is sufficiently extraordinary that it would not have been obvious to a person of ordinary skill in the art at the time of the application for patent.*<sup>87</sup>

A “person skilled in the art” is a ‘fictious’<sup>88</sup> person defined as an “ordinary practitioner aware of what was general knowledge at the time of invention.”<sup>89</sup> The determined standard level of skill required is of considerable importance, as a low level

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<sup>86</sup> 35 U.S.C. § 103; *The New United States Patent Law*. Black line ed. Harvard, Mass: LegalPub.com, Inc.

<sup>87</sup> Eric M. Dobrusin & Ronald A Krasnow, *supra* at 320.

<sup>88</sup> Alexander Harguth & Steven Carlson, *Patents In Germany and Europe: Procurement, Enforcement and Defense: an International Handbook* (Kluwer Law International 2011), p. 72.

<sup>89</sup> Bruno van Pottelsberghe de la Potterie, *supra* at 26.

of skill will favor the patentee. In the U.S. Supreme Court *Graham*-case,<sup>90</sup> a framework for evaluating obviousness under Section 103 was established.<sup>91</sup>

The former § 103 was complex and almost unreadable. The U.S. standard of “non-obviousness” was laxer<sup>92</sup> than the European “inventive step” requirement.<sup>93</sup> The future will show us if this has changed in light of the recent reform.

#### (4) Utility

As established in the already mentioned title 35, § 101, USC, inventions must have “utility” to be patentable. This means that they must produce a “useful, concrete and tangible result.”<sup>94</sup> The utility requirement is an essential criterion of patentability in the United States. It’s usually not an issue, unless someone tries to patent something that makes no sense or would not work. To make it clear, “generally this criterion is not hard to meet as long as the claim makes sense.”<sup>95</sup>

### **3.1.2. Patentee’s Rights**

The rights are provided by Article 28 of the TRIPS agreement. They are clearly defined in the U.S. statute as:

*The right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States(...).*<sup>96</sup>

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<sup>90</sup> Full text of the case available at : <http://caselaw.lp.findlaw.com/scripts/getcase.pl?navby=CASE&court=US&vol=383&page=1>, (last visited July 25th, 2013)

<sup>91</sup> Paul M. Rivard and Allen Gardner, *supra* at xv.

<sup>92</sup> *Id.*

<sup>93</sup> Marie Mustin, *supra* at 32.

<sup>94</sup> Eric M. Dobrusin & Ronald A Krasnow, *supra* at 313.

<sup>95</sup> Charles R. Macedo, *supra* at 24.

<sup>96</sup> Title 35 U.S.C. § 154 (a) (1); [http://www.uspto.gov/web/offices/pac/mpep/consolidated\\_laws.pdf](http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf), (last visited July 23rd, 2013)

The term “exclude” is the key term in this definition.<sup>97</sup> A patent permits the patentee to stop others from using the invention without a contractual license. The patentee is granted a temporary and territorially limited exploitation monopoly: in the U.S. this term is 20 years for utility patents and 14 years for design patents.<sup>98</sup>

### 3.1.3. Patentee’s Obligations

First of all, the patentee has, in consideration for the grant of a monopoly, a “duty to disclose.” A clear and complete disclosure of the invention and of any prior art<sup>99</sup> known to be material to patentability is required.

Secondly, the patentee will have to pay the costs of the patenting process. The major costs in practice, however, are the external lawyer’s charges.<sup>100</sup> Also, patent maintenance fees must be paid to maintain the patent in force.<sup>101</sup>

Finally, to avoid monopolistic abuses, the patentee will, in some situations,<sup>102</sup> have to grant compulsory licenses. The United States, however, has “little sympathy”<sup>103</sup> for compulsory licensing. Some authors recommend, therefore, that the United States “follow the more favorable attitude toward compulsory licensing found in the European Union as a means to stimulate innovation, research, and development.”<sup>104</sup>

We will see in a later section that compulsory licensing is better harmonized and easier to get in the European Union. We will also see that, over time, the obligations of the patentee have been reduced.

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<sup>97</sup> *What Is a Patent?*, Chicago, Ill.: ABA Section of Intellectual Property Law, 2006, p. 5.

<sup>98</sup> *Id.*, p. 6.

<sup>99</sup> Bruno van Pottelsberghe de la Potterie, *supra* at 20.

<sup>100</sup> *What Is a Patent?*, Chicago, Ill.: ABA Section of Intellectual Property Law, 2006, p. 14.

<sup>101</sup> USPTO official website: <http://www.uspto.gov/patents/process/maintain.jsp>, (last visited July 24th, 2013)

<sup>102</sup> Compulsory licenses can, for example, be granted for pharmaceutical products (justification by public health), in cases of dependence, or if there is insufficient exploitation of the patent.

<sup>103</sup> Jarrod Tudor, *Compulsory Licensing in the European Union*, ExpressO, 2012, p. 225,

Available at: [http://www.georgemasonjicl.org/wp-content/uploads/2013/05/TUDOR\\_4\\_J\\_Intl\\_Com\\_Law\\_222.pdf](http://www.georgemasonjicl.org/wp-content/uploads/2013/05/TUDOR_4_J_Intl_Com_Law_222.pdf), (last visited July 24th, 2013)

<sup>104</sup> *Id.*, p. 226.



## 3.2. Patentability in the European Union

### 3.2.1. Conditions

The conditions of patentability in the European Union are established in the European Patent Convention (EPC).<sup>105</sup> Article 52 of the EPC establishes the conditions of patentability: European patents shall be granted for (1) any inventions, in all fields of technology, provided that they are (2) new, (3) involve an inventive step, (4) are susceptible to industrial application, and (5) licit.

#### (1) An Invention

This condition is similar to the invention condition used in the United States and is not<sup>106</sup> defined in the EPC. The EPC makes, however, in article 52 §2, a clearer distinction between “inventions” and “discoveries”: while inventions are patentable, discoveries are not. The use of the term “discovers” in section 101 of the American Statute could be misleading, but should not be it:

*“Discovers” means something more specific under the Patent Law than it does in common usage. Someone can discover a new planet, a new species of animal, or the way certain molecules behave in solution. However, these “discoveries” are not patentable under U.S. Patent Law.<sup>107</sup>*

The technical character of an invention is playing the preponderant role, since objects lacking technical nature are not patentable in the EU.

#### (2) Novelty

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<sup>105</sup> Article 52 et seq. EPC.

<sup>106</sup> Sigrid Sterckx and Julian Cockbain, *Exclusions From Patentability: How Far Has the European Patent Office Eroded Boundaries.*, Cambridge: Cambridge University Press, 2012, p. 67.

<sup>107</sup> Joseph P. Kennedy, Wayne H. Watkins & Elyse N. Ball., *How to Invent and Protect Your Invention* (2012), p. 27.

This requirement for patentability is also common to the U.S. and the European Union. The principle is nowadays the “absolute” novelty. The principle is established in article 54 of the EPC. Before the U.S. adopted the “first inventor to file” system, important differences in its application existed between the EU and the U.S. It’s a very strict and important criterion, and scientists can easily risk invalidating their patent filings due to this requirement:

*Everything that was made publicly available before the priority date of a patent application is relevant for assessing the novelty of an invention. It makes no difference where in the world the disclosure was made, or in which language. It is also irrelevant who made the disclosure. Even the applicant can destroy the novelty of his invention if he previously disclosed to the public, in whatever form, in writing, orally or over the internet.*<sup>108</sup>

The invention cannot already be known in the current “state of art.” One single prior art can destroy this criterion. However, a novelty-destroying disclosure requires compulsorily “availability”<sup>109</sup> to the public.

### (3) Inventive Step

This requirement is the equivalent of the U.S. “non-obviousness” standard. It’s provided in article 56 of the EPC<sup>110</sup>. The essence is the same but the practices used to assess this criterion differ.

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<sup>108</sup> Alexander Harguth & Steven Carlson, *supra* at 62-63.

<sup>109</sup> *Id.*, p. 64; see also p. 65: *this is an important distinction from U.S. law, where confidential sales may amount the prior art disclosures.*

<sup>110</sup> Art. 56 EPC: *An invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art. If the state of the art also includes documents within the meaning of Article 54, paragraph 3, these documents shall not be considered in deciding whether there has been an inventive step.* (EPO official website: <http://www.epo.org/law-practice/legal-texts/html/epc/2010/e/ar56.html>, (last visited July 23th, 2013))

*At the EPO, the evaluation of the inventive step is based on the problem-solution approach and the “could-would”<sup>111</sup> concept. In the US, the concepts that prevail in courts are the “teaching-suggestion-motivation” test and the “Graham”<sup>112</sup> factors.<sup>113</sup>*

In both systems, it’s required that the invention is not obvious, regarding the entire state of the art, for a skilled person and is an objective assessment.

(4) Amenability to Industrial Application

In the EU, the equivalent to the U.S. “utility” requirement is the “industrial application” requirement. This condition is established in article 57 of the EPC, and reads as follows:

*An invention shall be considered as susceptible of industrial application if it can be made or used in any kind of industry, including agriculture.<sup>114</sup>*

In other words, the invention must have a concrete technical basis that could lead to “practical exploitation in the industry.”<sup>115</sup>

This EU standard is quite different from the U.S. requirement; in the U.S., the concept of “utility” is very large. If every invention that is “useful,” in the sense that “its

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<sup>111</sup> “The “could-would” concept consists of investigating whether the skilled person would have been prompted to modify the closest prior art in such a way as to arrive at something falling within the terms of the claims. In such a case, the invention does not involve an inventive step and the patent is, therefore, not granted.” (Bruno van Pottelsberghe de la Potterie, *supra* at 26.)

<sup>112</sup> “According to the “Graham factors”, obviousness should be determined by: 1) the scope and content of the prior art; 2) the level of ordinary skill in the art; 3) the differences between the claimed invention and the prior art; and 4) objective evidence of non-obviousness. In addition, three factors might be used to provide evidence of “non-obviousness”: 1) commercial success; 2) long-felt but unsolved needs; and 3) failure of others.” (Bruno van Pottelsberghe de la Potterie, *supra* at 27.)

<sup>113</sup> Bruno van Pottelsberghe de la Potterie, *supra* at 26.

<sup>114</sup> Art. 57 EPC (EPO official website: <http://www.epo.org/law-practice/legal-texts/html/epc/2010/e/ar57.html>, (last visited July 23rd, 2013))

<sup>115</sup> Stephan C. Fritz, Elisabeth K Grünbeck & Ali Hijazi, *Key to the European Patent Convention* (Ed. 2012, 1. Aufl. 2012), p. 76.

use is beneficial to the society,”<sup>116</sup> is patentable, then almost anything could be patented since there are no real limits. The concept seems much too flexible and vague. This criterion makes it such that some areas which are unpatentable in the EU are patentable within the U.S.<sup>117</sup>. We will see later in this paper that this difference between the two patent systems is part of the problem of the prevalence of patent trolls in the U.S.

(5) Licit

Although this condition is not explicitly specified in the United States Act, this is also a requirement for patentability. The criterion is inspired by the TRIPS agreement:

*Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect ordre public or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law.*<sup>118</sup>

*European patents shall not be granted in respect of: (a) inventions the commercial exploitation of which would be contrary to "ordre public" or morality; such exploitation shall not be deemed to be so contrary merely because it is prohibited by law or regulation in some or all of the Contracting States; (...)*<sup>119</sup>

This condition seems to be self-evident but should not be overlooked; the legislator may consider some inventions illicit and therefore to be non patent-eligible subject matter.

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<sup>116</sup> Robert Signore, *La brevetabilité des inventions aux Etats-Unis d'Amérique*, Paris, Litec, 1988, p. 233.

<sup>117</sup> e.g. Business Methods or software.

<sup>118</sup> Art. 27, §2, TRIPS agreement: [http://www.wto.org/english/tratop\\_e/trips\\_e/t\\_agm3c\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/t_agm3c_e.htm), (last visited July 23rd, 2013)

<sup>119</sup> Art. 53 (a) EPC. (EPO official website: <http://www.epo.org/law-practice/legal-texts/html/epc/2010/e/ar53.html>, (last visited July 23rd, 2013))

### 3.2.2. The Patentee's Rights

The patentee's rights in Europe are not that much different to the rights of a patentee in the United States.

*A European patent shall, subject to the provisions of paragraph 2, confer on its proprietor from the date on which the mention of its grant is published in the European Patent Bulletin, in each Contracting State in respect of which it is granted, the same rights as would be conferred by a national patent granted in that State.*<sup>120</sup>

We see, however, that the rights conferred depend on the different rights in the Contracting States in which the patent is granted. There is currently no uniform protection; however, this will probably change in 2014 with the creation of “unitary patent protection.”<sup>121</sup> The same protection will apply for a unitary patent in every Member State (MS) in which the patent has effect:

*(1) The European patent with unitary effect shall confer on its proprietor the right to prevent any third party from committing acts against which that patent provides protection throughout the territories of the participating Member States in which it has unitary effect, subject to applicable limitations.*

*(2) The scope of that right and its limitations shall be uniform in all participating Member States in which the patent has unitary effect.*

*(3) The acts against which the patent provides protection referred to in paragraph 1 and the applicable limitations shall be those defined by the law applied to European patents with unitary effect in the participating Member State whose*

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<sup>120</sup> Art. 64 (1) EPC, (EPO official website : <http://www.epo.org/law-practice/legal-texts/html/epc/2010/e/ar64.html>, (last visited July 23rd, 2013))

<sup>121</sup> Regulation (EU) No 1257/2012 of the European Parliament and of the Council of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection, *OJ L 361*, 31.12.2012, pp. 1–8.

*national law is applicable to the European patent with unitary effect as an object of property in accordance with Article 7.*<sup>122</sup>

In other words, for each patent only one national law will be applicable throughout the territories of “enhanced cooperation”<sup>123</sup>; there will thus be uniformization of the rights.

### **3.2.3. Patentee’s Obligations**

Here again, the difference with the U.S. system is not substantive; in the European Union disclosure<sup>124</sup> is also required, annuities<sup>125</sup> must also be paid, and compulsory licenses are also possible. As already mentioned, this third matter is “largely unified”<sup>126</sup> by articles 30<sup>127</sup> and 31<sup>128</sup> of the TRIPS agreement, and easier to get in the EU than in the U.S.

The World Intellectual Property Organization (WIPO) also attempted to address the compulsory licensing matter,<sup>129</sup> especially regarding the failure to work or insufficient exploitation. The Paris Convention for the protection of Industrial Property provides, for instance, that:

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<sup>122</sup> *Id.*, art. 5.

<sup>123</sup> See also chapter 6 of this paper, p. 52, for a critic analysis of the “unitary patent package”.

<sup>124</sup> See art. 29 of the TRIPS agreement: “Members shall require that an applicant for a patent shall disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art and may require the applicant to indicate the best mode for carrying out the invention known to the inventor at the filing date or, where priority is claimed, at the priority date of the application.”; see also art. 83 EPC. (EPO official website: <http://www.epo.org/law-practice/legal-texts/html/epc/2010/e/ar83.html>, (last visited July 23rd, 2013))

<sup>125</sup> Art. 86 EPC (EPO official website : <http://www.epo.org/law-practice/legal-texts/html/epc/2010/e/ar86.html>, (last visited July 23rd, 2013))

<sup>126</sup> Bernard Remiche, Vincent Cassiers, *Droit des brevets d’invention et du savoir-faire : créer, protéger et partager les inventions du XXIe siècle*, Bruxelles, Larcier, 2010, p. 380, n° 469.

<sup>127</sup> Art. 30 TRIPS agreement: “Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.”

<sup>128</sup> Art. 31 TRIPS agreement: “Where the law of a Member allows for other use (7) of the subject matter of a patent without the authorization of the right holder, including use by the government or third parties authorized by the government (...)” a list of conditions must be respected.

<sup>129</sup> Jarrod Tudor, *supra* at 226.

*(1) Importation by the patentee into the country where the patent has been granted of articles manufactured in any of the countries of the Union shall not entail forfeiture of the patent.*

*(2) Each country of the Union shall have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, failure to work.*

*(3) Forfeiture of the patent shall not be provided for except in cases where the grant of compulsory licenses would not have been sufficient to prevent the said abuses. No proceedings for the forfeiture or revocation of a patent may be instituted before the expiration of two years from the grant of the first compulsory license.*

*(4) A compulsory license may not be applied for on the ground of failure to work or insufficient working before the expiration of a period of four years from the date of filing of the patent application or three years from the date of the grant of the patent, whichever period expires last; it shall be refused if the patentee justifies his inaction by legitimate reasons. Such a compulsory license shall be non-exclusive and shall not be transferable, even in the form of the grant of a sub-license, except with that part of the enterprise or goodwill which exploits such license.*

*(5) The foregoing provisions shall be applicable, mutatis mutandis, to utility models.<sup>130</sup>*

Patentability is often described as a legal mechanism granting to inventors an exclusive “right to exclude others.” Although this definition is correct, it is not

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<sup>130</sup> Art. 5, Paris Convention for the protection of Industrial Property of March 20, 1883, as revised at Brussels on December 14, 1900, at Washington on June 2, 1911, at The Hague on November 6, 1925, at London on June 2, 1934, at Lisbon on October 31, 1958, and at Stockholm on July 14, 1967, and as amended on September 28, 1979, available at [http://www.wipo.int/treaties/en/ip/paris/trtdocs\\_wo020.html](http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html), (last visited July 23rd, 2013)

complete;<sup>131</sup> patent protection grants an exclusive exploitation “right”, or as we could even say in Europe, an exclusive exploitation “obligation,” so as not to face compulsory licenses.

Historically, the sanction, if the condition is not fulfilled, was forfeiture of the patent; the sanction was thus much more severe.

Also, historically, the obligation was to exploit the patent locally: “‘local working’ refers to the requirement that the patentee must manufacture the patented product, or apply the patented process, within the patent granting country.”<sup>132</sup> Nowadays, this obligation is replaced by the obligation to “supply the domestic market to a sufficient extent,”<sup>133</sup> regardless of where the products are manufactured; hence, importations are accepted.

All of these changes have weakened the original “exploitation” obligation. It has made it much easier for patentees to fulfill this requirement, and therefore to apply for patents since their obligations were reduced. Although it is beneficial for free trade to put on an equal footing “importations” and “local working,” we must wonder if the “lack of local working requirement” puts a break on the development of new technologies, since entities, like “patent trolls,” can benefit from the rights of patent protection without having to industrially exploit the invention.

## **IV. General “Boom” of Patents and Other Factors**

### **Leading to the Expansion of Patent Trolls.**

#### **4.1. The Growth of Patent Applications and Acceptances**

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<sup>131</sup> Bernard Remiche, Vincent Cassiers, *supra* at 376, n° 466.

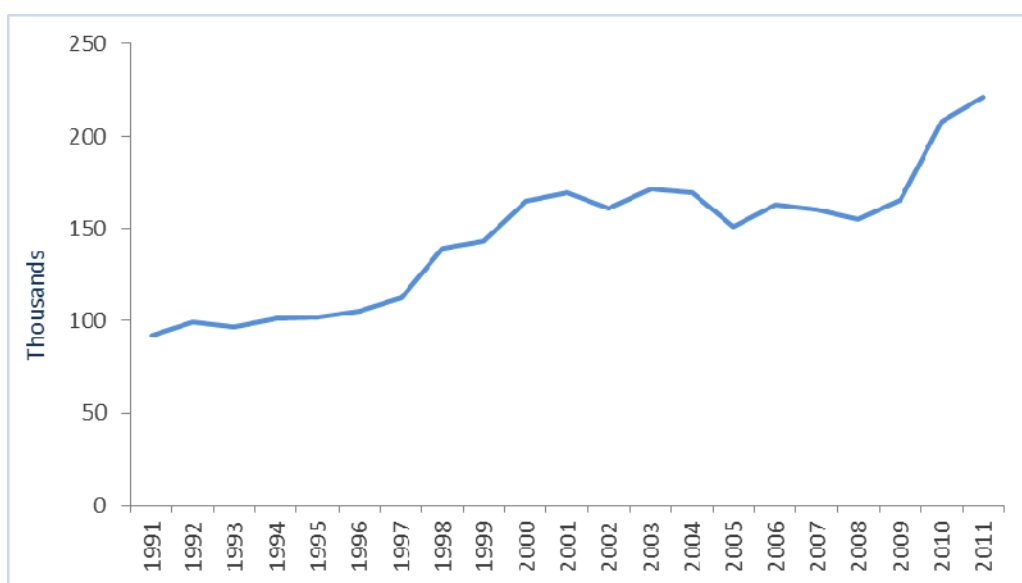
<sup>132</sup> Michael Halewood, *Regulating Patent Holders: Local Working Requirements and Compulsory Licenses at International Law*, 35 Osgoode Hall Law Journal 243 (1997), p. 249.

<sup>133</sup> Bernard Remiche, Vincent Cassiers, *supra* at 377, n° 466.



For decades, there has been an explosion of patent applications and acceptances. Both in the European Union as in the United States, this patent flood<sup>134</sup> is a fact. As we can see on the next graph,<sup>135</sup> the rise of patent issued by the United States Patent and Trademark Office (USPTO) is obvious and still ongoing. Since 2008, the augmentation of patent issuances is even reaching a new peak.

### U.S. Utility Patents Issued Over Time



Source: PatentFreedom © 2013.

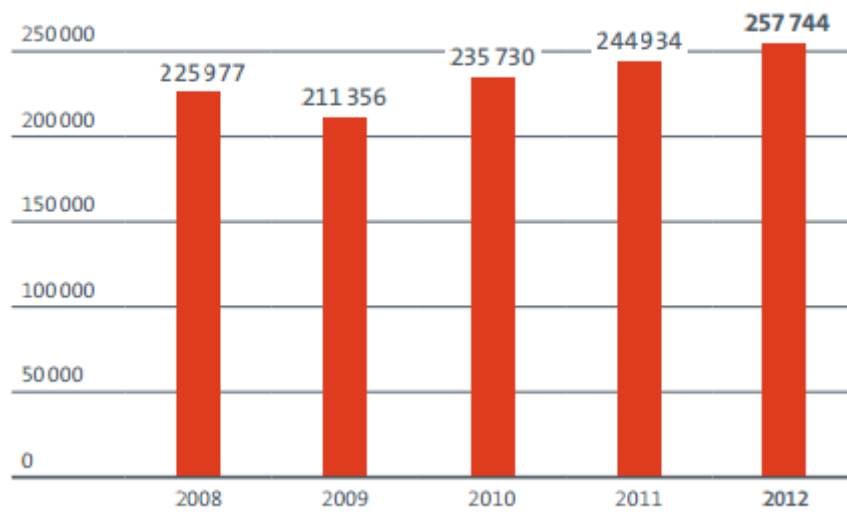
In the European Union, the total European patent filings at the European Patent Office (EPO) have also reached a new record. Nevertheless, in comparison with the U.S., we can perceive in the graph<sup>136</sup> (*infra.*) that the growth is proportionally less spectacular; despite the 2009 crisis peak, the increase between 2011 and 2012 was only 5.2%.

<sup>134</sup> Dan L. Burk & Mark A. Lemley, *The Patent Crisis and How the Courts Can Solve It* (University of Chicago Press 2009), p. 22.

<sup>135</sup> Available at : <https://www.patentfreedom.com/about-npes/litigations/>, (last visited July 17th, 2013)

<sup>136</sup> EPO, *facts and figures 2013*, available at [http://documents.epo.org/projects/babylon/eponet.nsf/0/c28e4e5763e75817c1257b57004347f1/\\$FILE/epo\\_facts\\_and\\_figures\\_2013\\_en.pdf](http://documents.epo.org/projects/babylon/eponet.nsf/0/c28e4e5763e75817c1257b57004347f1/$FILE/epo_facts_and_figures_2013_en.pdf) , (last visited July 23th, 2013)

## Total European patent filings<sup>2</sup>



<sup>2</sup> Direct European filings under the EPC and international filings under the PCT.

The reasons for this increasing trend are multiple. Firstly, the recent boom of the biotechnologies and information and communication technologies (ICT) is undoubtedly a relevant factor, but not the only one. As some authors like to point out, “the rise in U.S. applications was roughly uniform across technology classes (e.g., it was not heavily concentrated in biotechnology and software).”<sup>137</sup>

Secondly, the patenting philosophy of companies has changed. We already mentioned the importance of “defensive patenting”<sup>138</sup> as a strategy for companies. It has become nowadays very famous, and ironically, much of the patent flood can therefore “be attributed to operating companies seeking to build patent portfolios to enable counter-claims against patent assertions from other operating companies.”<sup>139</sup> The rise of patent applications seems, therefore, to also be a remedy for companies against other

<sup>137</sup> Peter J. Klenow, *Stronger protection or technological revolution: what is behind the recent surge in patenting?*; A comment, Carnegie Rochester Conference Series on Public Policy : A Bi-annual Conference Proceedings, (Elsevier Vol. 48. 1998), p. 305.

<sup>138</sup> See section 2.1.2. and 7.1.1. of this paper.

<sup>139</sup> <https://www.patentfreedom.com/about-npes/litigations/>, (last visited July 17th, 2013)

market players or patent trolls. Patents have become a strategic component for acquiring a competitive position on the market.<sup>140</sup>

Thirdly, globalization has certainly also played an important role; innovative companies from emerging countries have had to seize the opportunity to be competitive in developed countries with their contenders by patenting their inventions.

Fourthly, the world is perhaps being a bit more innovative, due to better R&D.

## **4.2. The Problem of “Low Quality” Patents: a Consequence of the Patent Flood.**

As analyzed in the previous section, the exact causes of the patent flood remain a mystery. Despite all the factors already mentioned, the lack of difficulty to obtain a patent and the relaxed granting procedure requirements in front of the relevant patent offices played also, without doubt, a significant role.

*Even if the world is more innovative than it used to be, we doubt it is four times more innovative than it was in the 1980s, or that it is nearly twelve times as innovative as the 1870s, a decade that saw the development of the telephone, the lightbulb, and enormous railroad innovation, among other innovations. The more logical explanation is that it is simply easier to get a patent today than it used to be, and that we are granting patents on more obvious inventions than in the past.*<sup>141</sup>

Indeed, patent offices seem to have become, progressively after their creation, victims of their own success. This is the case in both the US and the EU. Modern patent

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<sup>140</sup> Bernard Remiche, *La propriété intellectuelle au coeur d'une nouvelle stratégie*, in *Technologie et concurrence*, Mélanges en l'honneur de Hanns Ullrich, Bruxelles, Larcier, 2009, p. 276.

<sup>141</sup> Dan L. Burk & Mark A. Lemley, *supra* at 22.

law is a non-anticipated “mass-production causing overburdened”<sup>142</sup> patent offices and, by consequence, excessive laxity in monitoring “low quality” patents in both systems.

This issue may be the source of all problems, since weak patents are responsible for a considerable fraction of all patent lawsuits.<sup>143</sup> Before 1900, it took less than a month to get a patent. Nowadays, it can take up to five years: “on average, the issue of a European patent takes about 4.2 years from the date of filing the application (Harhoff and Reitzig, 2001).”<sup>144</sup> And don’t think that, because of this longer period, the patent examiner takes more time to analyze the application. In fact, it’s just the opposite: patent applications are left lying around in the drawer, and once an examiner begins to look at it, he unexpectedly spends little time assessing whether the patent should be issued or not. The time spent over the 4.2 years of patent examination is “eighteen hours” on average.<sup>145</sup>

It is, therefore, not a surprise to read that the patent offices issue “many patents that, had they had perfect knowledge, would have been rejected.”<sup>146</sup>

Lack of time, human mistakes in harder cases, overburdened examiners - all these are reasons to explain the granting of weak patents. These patents are the result of an inadequate examination process. The question arises of what are weak patents. How can patent quality be assessed?

*The most suitable way to evaluate patent quality is to measure how well the patent meets the statutory requirements of the jurisdictions in which it is issued: patentable subject matter, utility<sup>147</sup>, novelty, non-obviousness<sup>148</sup>, appropriate*

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<sup>142</sup> *Id.*

<sup>143</sup> John Allison, Mark A. Lemley, & Joshua Walker, *Patent Quality and Settlement Among Repeat Patent Litigants* (Stanford Law and Economics Olin Working Paper No. 398, 2010), p. 1, Available at SSRN: <http://ssrn.com/abstract=1677785>, (last visited July 25th, 2013)

<sup>144</sup> Stuart J. H. Graham et al., *Patent Quality Control: A Comparison of U.S. Patent Reexaminations and European Patent Oppositions*, in Wesley Cohen and Merrill Stephen, *PATENTS IN THE KNOWLEDGE-BASED ECONOMY* (2003), p. 87.

<sup>145</sup> Dan L. Burk & Mark A. Lemley, *supra* at 23.

<sup>146</sup> *Id.*

<sup>147</sup> Cfr. “Industrial application” in the EU.

<sup>148</sup> Cfr. “Inventive step” in the EU.

*disclosure and enablement. Patent quality can also be assessed from the standpoint of certainty as to the validity and scope of the patent claims when challenged at courts.*<sup>149</sup>

In other terms, quality can be defined as “the extent to which patent systems comply with their own patentability conditions in a transparent way.”<sup>150</sup>

A “high quality” patent can thus be defined as a “born valid”<sup>151</sup> patent whose legal certainty can almost not be challenged<sup>152</sup>. Weak patents can be seen as their opposite; they should never have been granted, e.g. for products lacking innovation. As we already explained, patent trolls, and other patentees that file lawsuits, put their patent at risk. And, partly due to this weak patent issue, a significant percentage of contested patents are held invalid.<sup>153</sup>

The patent offices seem to have reached a stage where the quantity of patents being lodged is impacting the quality of patents being granted. Patent examiners are under enormous time constraints due to the rising number of unprocessed applications (*backlog*<sup>154</sup>); therefore, they have less time to pay attention to each element<sup>155</sup> of the application. The system also doesn't provide examiners with an incentive to analyze better the applications. The reverse is even the case; patent examiners are “rewarded by the civil service system only for an initial response to a patent application and for finally disposing of an application.”<sup>156</sup> This recompense encourages them rather to dispose of their cases as quickly as possible. Furthermore, the system also encourages examiners to

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<sup>149</sup> Guiseppe Scellato et al., *Study on the Quality of the European Patent System*, European Commission/DG Market (Tender MARKT/2009/11/D, Contract Notice in the Official Journal of the European Union 2009/S 147-214675 of 04/08/2009), p. 19.

<sup>150</sup> Bruno van Pottelsberghe de la Potterie, *supra* at 12.

<sup>151</sup> Stuart J. H. Graham et al., *supra* at 85.

<sup>152</sup> *Id.*

<sup>153</sup> John Allison, Mark A. Lemley, & Joshua Walker, *supra* at 2.

<sup>154</sup> Carol M. Nielsen and Michael R. Samardzija, *Compulsory Patent Licensing: Is It a Viable Solution in the United States?*, 13 Mich. Telecomm. Tech. L. Rev. 509 (2007), p. 527, available at <http://www.mttl.org/volthirteen/nielsen&samardzija.pdf>, (last visited July 25th, 2013)

<sup>155</sup> e.g. no responsible search for prior art.

<sup>156</sup> Dan L. Burk & Mark A. Lemley, *supra* at 23.

be “patent friendly” since the patent office can never really, once and for all, reject a patent application as the applicant can always later retry his luck to convince the examiner. For these reasons, as long as these elements don’t change, the patent offices will continue to issue weak patents.

The “legally” weak patents are also “techno-economically” weak, although they could bring high return. Therefore, they damage competition, harm innovation and have detrimental effects for consumers,<sup>157</sup> especially when they are related to important technologies for people. These patents are the daily livelihood of patent trolls, and measures should be taken to avoid their issuance. Reports<sup>158</sup> are already trying to determine the effectiveness of the patent offices quality assurance program and making recommendations to improve the system. Increasing the number of examiners could be efficient, but it’s not the core concern since it’s the complete patent system that is misused. The incentives must be changed. A thorough reform<sup>159</sup> of the procedures for issuing patents upstream and of the litigation system downstream would, therefore, be a better option.

### **4.3. The Overvaluation of Patents**

The evaluation of inventions and patents has always been rather speculative. Patents provide their owner, through the right to exclude others from practicing the invention, the possibility to get a fair return on their investment; patents thus have an “economic” value. When we analyze the high proportion of intellectual property in the capital of companies – intellectual capital is the most important asset of many of the world’s

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<sup>157</sup> Guiseppe Scellato et al., *supra* at 19.

<sup>158</sup> U.S. Patent and Trademark Office (USPTO) Patent Quality Assurance Process (Final Report No. OIG-II-006-I), <http://www.oig.doc.gov/OIGPublications/OIG-11-006-I.pdf>, (last visited July 25th, 2013)

<sup>159</sup> Bernard Remiche, Vincent Cassiers, *supra* at 36.

largest and powerful companies<sup>160</sup> - it seems clear that the correct valuation of patents is vital to not disrupt the system.

The triumph of leading companies such as Amazon, Google, Microsoft, and Wal-Mart is based on their intellectual capital measurement and management.<sup>161</sup>

As patents are intangible assets, it is difficult to value them precisely; however, tests can be made and tools are available to avoid too erroneous assessments:

*Careful study should be given to the required investment for making a new product, or alternatively, to the necessary changes in existing production facilities. The advertising budget that will also be required to change public buying habits to accept a new product is important. The potential size of the market also should be considered. Finally a study should be made to predict the likely profit from the product. In sum, to determine the potential value of a patent, it is necessary to make a comprehensive business evaluation of the resulting product and/or its production.*<sup>162</sup>

A lot of factors must thus be taken into account, especially the commercial importance of the innovation. Others consider that it's rather the "potential damages"<sup>163</sup> that will determine what a patent is worth. Whatever the accounting criteria or valuation techniques used, the estimation should be undertaken with caution.

Originally a simple tool of protection, intellectual property rights are now playing an increasing role for companies as a primary source of value creation.<sup>164</sup> Caused by the

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<sup>160</sup> World Intellectual Property Organization (WIPO) official website : [http://www.wipo.int/sme/en/documents/value\\_ip\\_intangible\\_assets.htm](http://www.wipo.int/sme/en/documents/value_ip_intangible_assets.htm), (last visited July 25th, 2013)

<sup>161</sup> Bernard Marr, *Management accounting guideline: Impacting Future Value: How to Manage your Intellectual Capital*, The Society of Management Accountants of Canada (CMA Canada), the American Institute of Certified Public Accountants, Inc. (AICPA) and The Chartered Institute of Management Accountants (CIMA), p. 3, available at <http://media.journalofaccountancy.com/JOA/Issues/2008/09/MAG%20IntCapital-Eng.pdf>, (last visited July 25th, 2013)

<sup>162</sup> *What Is a Patent?*, Chicago, Ill.: ABA Section of Intellectual Property Law, 2006, p. 8.

<sup>163</sup> Charles R. Macedo, *supra* at 193: pre-issuance damages, post-issuance compensatory damages, enhanced damages (including treble damages and attorney fees).

<sup>164</sup> R. Lallement, *Evaluation et valorisation financière de la propriété intellectuelle : nouveaux enjeux*,

financialization of the world economy, the patent becomes a strategic weapon and tool for the valuation of intangible assets of the company.

Given the growing interest for patent protection, patents have a higher embedded value than before and are more and more overpriced in the balance sheets of many companies. This overpricing can be disastrous as patents are intangible assets protecting “knowledge,” which, in contrast to the invented products or processes, has “no” economic value in itself.<sup>165</sup> The valuation of patents is thus a fiction and disaster occurs when they are valued not on the basis of their worth in the existing market, but on the basis of their value in preventing the emergence of a new market,<sup>166</sup> especially if this value is considered higher than the value of the existing market. Therefore, a standard rule is that:

*(...) the value of the patent itself can be no greater than the commercial value of the invention covered by the patent. It is the invention described and claimed in a patent and the market for the products or processes based on that invention that determine the value of the patent and not vice versa.*<sup>167</sup>

Patent holders must learn to play the game honestly. As we will see in the next chapter, valuation is at their own risk if a crisis arises.

## **V. Comparative Study: The Weaknesses of the American Patent System and the Risks of an Unsustainable “Patent Bubble”**

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*nouveaux mécanismes*, in Centre d’Analyse Stratégique, La note de veille, octobre 2008, p. 1.

<sup>165</sup> Marie Mustin, *supra* at 42.

<sup>166</sup> Bernard Rémiche, Vincent Cassiers, *supra* at 35.

<sup>167</sup> *What Is a Patent?*, Chicago, Ill.: ABA Section of Intellectual Property Law, 2006, p. 7.

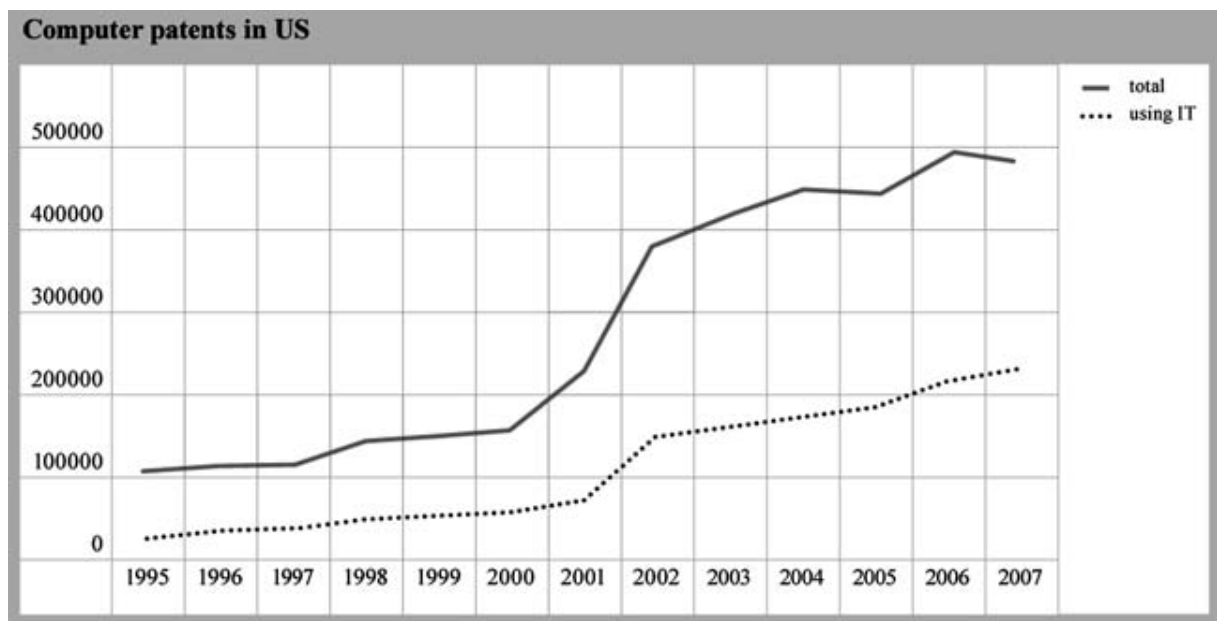


In this chapter, we will try to understand the reasons why patent trolls establish themselves more easily in the U.S. than in the EU. Although the trolls have already crossed the Atlantic, the phenomenon still remains essentially “American.” The causes of this occurrence in the U.S. are multiple.

## 5.1. The Weaknesses of the American Patent System

### 5.1.1. First Patentability Enlargement: “Software”

Since the 1980s, the United States accepted patentability of software or computers. Since then, the number of computer patents shows a continuing increase. (See graph<sup>168</sup> below)



As we can see, the rise between 1995 and 2007 is spectacular, going from approximately 100 000 patents to 500 000. This is a five-fold increase, and it is arguable that the internet bubble was a significant cause.

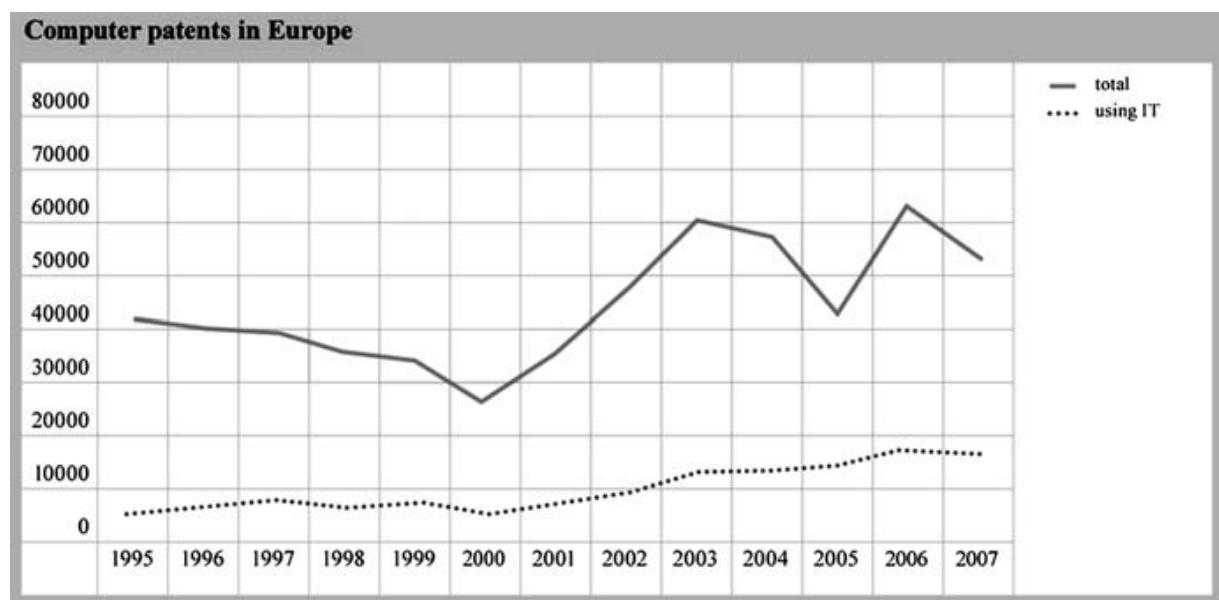
In the EU, there was also a rise of computer patents. However, it does not bear comparison with the situation in the US as software is patentable in the EU only if it's

<sup>168</sup> Daniel Closa, *Patent Law for Computer Scientists: Steps to Protect Computer-implemented Inventions*, (Springer 2010), p. 10.

implemented in a kind of machine. Article 52 (2)(c) EPC lists<sup>169</sup> computer programs as subject matter that shall not be regarded as inventions, since they do not have a sufficient “technical character” or “technical teaching.”<sup>170</sup> Article 52 (3) EPC clarifies however that:

*Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.*<sup>171</sup>

Therefore, in the EU, software in itself is not patentable. A patent will thus never be issued if only software is claimed. Software is only patentable if it fulfills the “machine trick.” As a result, subject matter that includes a computer program can be patented, e.g. software loaded on hardware having a technical character. The European Union thought of drafting a special directive in 2002<sup>172</sup> to make this area “per se” patentable, but this legal text was challenged in the European Parliament (EP) and was never passed.



<sup>169</sup> The list of art. 52 (2) EPC is considered “non-exhaustive”.

<sup>170</sup> Alexander Harguth & Steven Carlson, *supra* at 56.

<sup>171</sup> Stephan C. Fritz, Elisabeth K Grünbeck & Ali Hijazi, *supra* at 72.

<sup>172</sup> Proposal for a Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions, COM (2002) 92 final, 20 February 2002, *O.J.E.U.*, 25 June 2002.

As we can see in the graph<sup>173</sup>(directly above), only approx. 50 000 computer patents were granted in the EU in 2007, compared to the 500 000 granted in the U.S: this is a major difference.

In the US, software “even if just software” is patentable. Unlike the EU, the American law does not expressly list things that are not patentable subject matter.<sup>174</sup> Although software could already be protected by copyright,<sup>175</sup> granting a far longer protection term than the patent term and requiring no procedural registration, the patentability of computer programs was progressively recognized under the impulse of lobbies and Supreme Court decisions. The main reason why patent protection is desired by some instead of copyright protection is that patents protect more than only the expression of an idea; they protect the whole invention and therefore have much more potential commercial value.

The enlargement of the patentability was possible in the United States since, as already mentioned, there is no explicit legal provision prohibiting the patentability of software. The situation is, therefore, more complex than in the EU. While, in contrast, mathematical algorithms, formulae, and equations could not be patented,<sup>176</sup> software is the only field where written codes, which are *per se* not patentable, perform usually useful tasks in machines and can therefore be patented.

*A software program is not patentable if it merely solves a mathematical problem or equation, or if it only crunches numbers. However, the application of an algorithm to achieve something useful can become the subject of a patent. In other words, software that makes use of a mathematical expression to achieve a specific useful result is patentable.*<sup>177</sup>

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<sup>173</sup> Daniel Closa, *supra* at 9.

<sup>174</sup> Gregory A. Stobbs, *Software Patents*, 3rd ed. New York: Wolters Kluwer Law & Business/Aspen Pub., 2012, § 4.01.

<sup>175</sup> *Computer Software Copyright Act of 1980*, Pub. L. No. 96-517, 94 Stat. 3015, 3028 (1980).

<sup>176</sup> Joseph P. Kennedy, Wayne H. Watkins & Elyse N. Ball, *supra* at 28.

<sup>177</sup> *Id.*, p. 89.

The United States Supreme Court had gradually to address this patentability interrogation; and its decisions on the topic are referred to as the "Supreme Court Trilogy" or "patent-eligibility trilogy."<sup>178</sup> First, in the 1972 *Gottschalk v. Benson* case,<sup>179</sup> the Supreme Court rejected the validity of direct and indirect patents on software and confirmed, therefore, the general thinking that software is not patentable:

*Uncertainty now exists as to whether the statute permits a valid patent to be granted on programs. Direct attempts to patent programs have been rejected on the ground of non-statutory subject matter. Indirect attempts to obtain patents and avoid the rejection, by drafting claims as a process, or a machine or components thereof programmed in a given manner, rather than as a program itself, have confused the issue further and should not be permitted.*<sup>180</sup>

In 1978<sup>181</sup>, the Supreme Court tried to lightly qualify this principle, and in 1981, the Court seems to have completely changed its mind:

*A claim drawn to subject matter otherwise statutory does not become non-statutory simply because it uses a mathematical formula, computer program, or digital computer. (...)When a claim containing a mathematical formula implements or applies the formula in a structure or process which, when considered **as a whole**, is performing a function which the patent laws were designed to protect (e. g.,*

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<sup>178</sup> Richard Stern, *What Kinds of Computer-Software related advances (if any) are Eligible for Patents? Part II: The "Useful Arts" Requirement*, IEEE Micro Journal, September 2008, p. 66, available at <http://docs.law.gwu.edu/facweb/claw/KindsElg-II.pdf>, (last visited July 25th, 2013)

<sup>179</sup> Gregory A. Stobbs, *supra* at § 4.02.

<sup>180</sup> GOTTSCHALK v. BENSON, 409 U.S. 63 (1972), available at : <http://caselaw.lp.findlaw.com/cgi-bin/getcase.pl?court=US&vol=409&invol=63>, (last visited July 25th, 2013)

<sup>181</sup> PARKER v. FLOOK, 437 U.S. 584 (1978)

*transforming or reducing an article to a different state or thing), then the claim satisfies 101's requirements.*<sup>182</sup>

Hence, when fulfilling the condition established in this jurisprudence, software can be patented. This was a big shock for the USPTO who had initially rejected the invention of software as unpatentable subject matter under Section 101. The Supreme Court confirmed the reversal by the Court of Customs and Patent Appeals (CCPA)<sup>183</sup> of the patent rejection. This decision was the gateway to software patents in the US, provided that innovations based on mathematical formula perform a useful and concrete function.

By allowing *per se* patentability of software, the United States certainly played to the advantage of patent trolls. A lot of applications were filed and, because of the USPTO's heavy workload and non-specialized staff in this area, a lot of "weak" software patents were granted. When we consider the importance of software in our daily lives, we can easily imagine the high commercial value that these patents could have on the market, and the attraction of patent trolls to acquire and misuse them.

### **5.1.2. Second Patentability Enlargement: "Business Methods"**

The question of the patentability of "business methods" is not new. Already in 1908, an American Court had to address the issue in the *Hotel Security Checking Co. v. Lorraine Co.*<sup>184</sup> case. The Court ruled that the bookkeeping system in question could not be patented. This case is "cited by the patent office and commentators over the years as authority for the proposition that 'business methods' are not patentable."<sup>185</sup> It's called

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<sup>182</sup> DIAMOND v. DIEHR, 450 U.S. 175 (1981), available at : <http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=us&vol=450&invol=175>, (last visited July 25th, 2013)

<sup>183</sup> The CCPA is the predecessor of the current "Court of Appeals for the Federal Circuit" (CAFC)

<sup>184</sup> *Hotel Security Checking Co. v. Lorraine Co.*, 160 F. 467 (2d Cir. 1908)

<sup>185</sup> Bradley C. Wright, *Business Method Patents: are there any limits?*, 2 J.MARSHALL REV. INTELL.PROP.L. 30,

the “business method exception” or “mathematical algorithm exception”. This exception was reconfirmed in the *Joseph E. Seagram & Sons v. Marzell*<sup>186</sup> case, where the court held that a patent on “blind testing” whiskey blends for consumer preferences<sup>187</sup> was also unpatentable.

Nonetheless, with the technological boom of computers in the 1990s, the Court changed its opinion in 1998 and held that business methods are not “inherently” unpatentable. No difference should be made between technical and business inventions: *Office personnel have had difficulty in properly treating claims directed to methods of doing business. Claims should not be categorized as methods of doing business. Instead such claims should be treated like any other process claims.*<sup>188</sup>

With this change, the Court affirmed the position of the USPTO<sup>189</sup> to make possible patentability of business methods. However, business methods, i.e. methods of doing business, could be defined in a very large sense. The bounds of business methods patents within Section 101 were therefore blurred until the 2010 *Bilski v. Kappos* Supreme Court clarification.<sup>190</sup>

In this case, the Supreme Court held that a “pure” “abstract” business method could usually not be patented. The Court introduced the “machine-or-transformation test”, one test that can be used to define if the business method is patentable subject matter. It’s not intended to be an “exclusive” test:

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p. 30, <http://www.jmripl.com/Publications/Vol2/Issue1/wright.pdf>, (last visited July 25th, 2013)

<sup>186</sup> *Joseph E. Seagram & Sons v. Marzell*, 180 F.2d 26 (D.C. Cir. 1950)

<sup>187</sup> Hani Z. Sayed and Erin Zaskoda, “Can I Get a Business Method Patent?”, *Orange County Business Journal*, VOL. 32 NO. 28 • JULY 13-19, 2009, <http://www.rutan.com/files/Publication/594f00c1-cfb8-47c7-9b9f-93ac785a87c4/Presentation/PublicationAttachment/2f854b02-740b-4693-b079-961138c96957/Article%20-%20Sayed.pdf>, (last visited July 25th, 2013)

<sup>188</sup> *State Street Bank v. Signature Financial Group*, 149 F.3d 1368 (Fed. Cir. 1998), available at <https://bulk.resource.org/courts.gov/c/F3/149/149.F3d.1368.96-1327.html>, (last visited July 25th, 2013)

<sup>189</sup> Morgan D. Rosenberg and Richard J. Apley, *Business Method and Software Patents: a Practical Guide.*, Oxford: Oxford University Press, 2012, p. 2.

<sup>190</sup> *Id.*, p. 1.

*The machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under §101. The machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible "process."*<sup>191</sup>

This test is much more difficult to satisfy than the previous “useful-concrete-tangible result” test, applied, for example, in the *State Street Bank*-case.<sup>192</sup> Business methods patents are thus since 2010 much more difficult to obtain than before. The conditions of this test are established in the *Re Bilski* decision:

*A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.*<sup>193</sup>

After all the twists and turns, the post-*Bilski* situation in the U.S. can be considered as quite similar to the stable situation in the EU: Article 52 (2)(c) EPC explicitly lists “methods for doing business”, *as such*<sup>194</sup>, as non patentable subject matter. Similarly to software in the EU, business methods could be patented if claimed in a package with another invention satisfying the requirements. However, as the next graph<sup>195</sup> demonstrates, these business method patents are generally not granted since they usually do not fulfill the technical and originality requirements in Europe. The line of negative outcomes in the EU follows, therefore, the curve of the applications.

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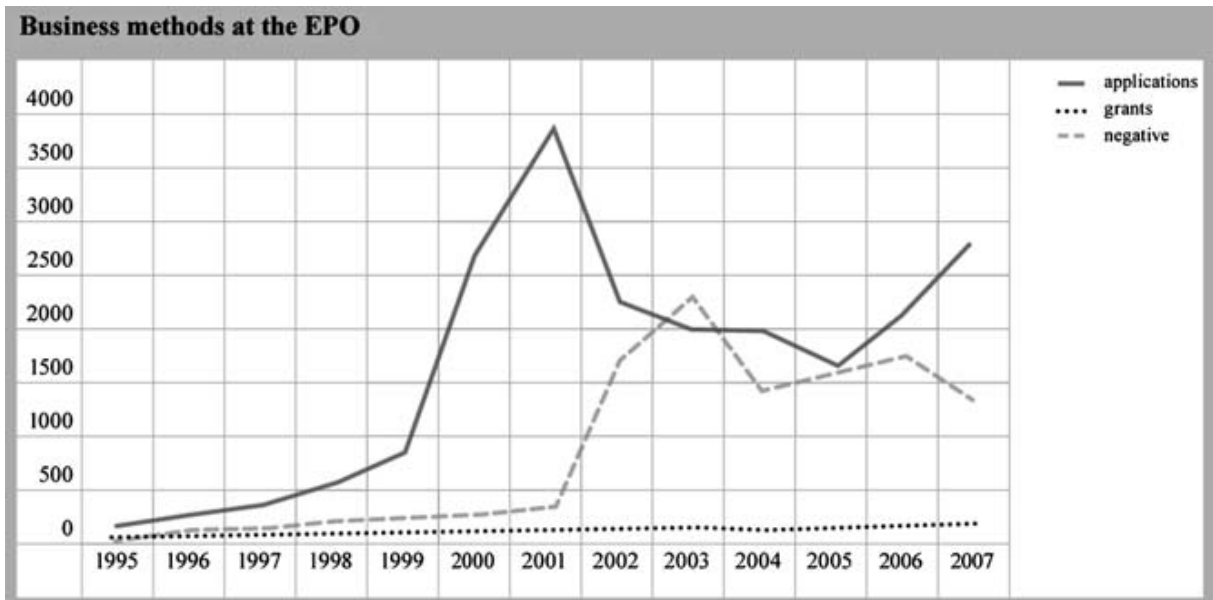
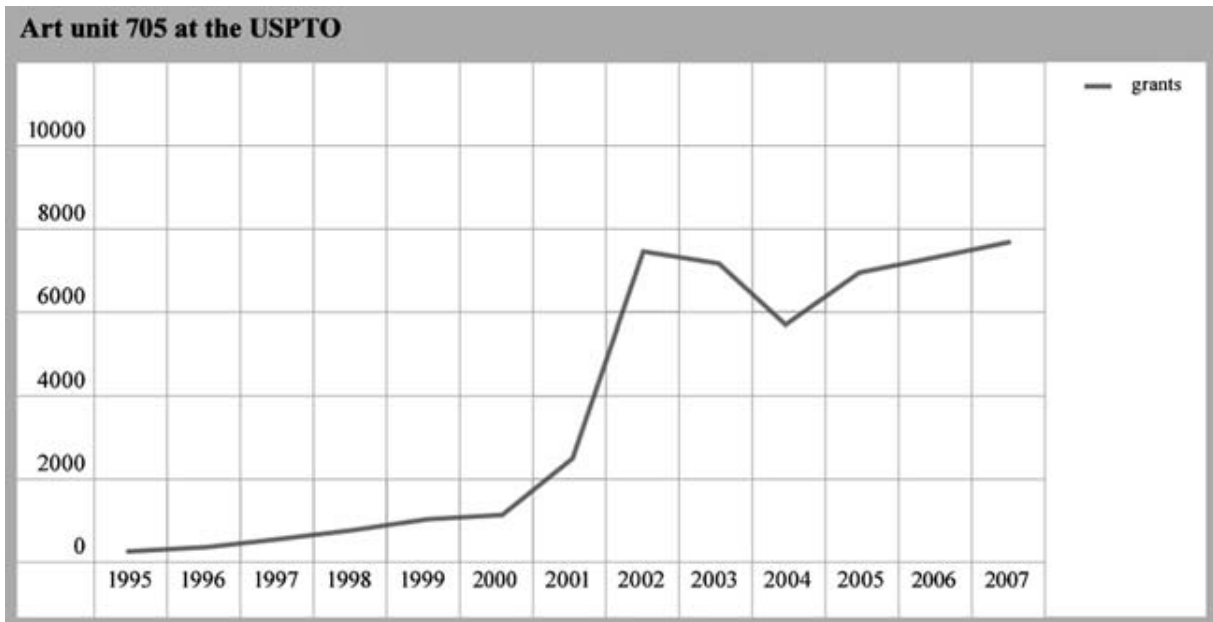
<sup>191</sup> *Bilski v. Kappos*, 561 U.S. (2010), [http://www.bitlaw.com/source/cases/patent/Bilski\\_v\\_Kappos.html](http://www.bitlaw.com/source/cases/patent/Bilski_v_Kappos.html), (last visited July 25th, 2013); and Amy L. Landers, *supra* at 314-317.

<sup>192</sup> Morgan D. Rosenberg and Richard J. Apley, *supra* at 7.

<sup>193</sup> *Re Bilski*, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (Fed. Cir. 2008), *available at* <http://www.cafc.uscourts.gov/images/stories/opinions-orders/07-1130.pdf>, (last visited July 25th, 2013)

<sup>194</sup> Art. 52 (3) EPC.

<sup>195</sup> Daniel Closa, *supra* at 13.



One can thus observe a big difference with the U.S., where the trend was a persistent increase of business method patents. However, as the second graph doesn't show, we can easily imagine that this trend reversed in 2010, in the United States, after the *Bilski*-case.

Nonetheless, the damage was done in the US. Before 2010, a lot of patents already had been laxly granted for non-original business methods. These methods were used by a lot of companies and have hence become possible targets for patent trolls. The US "hesitation" on whether business methods could be patented (or not) seems to have played in favor of patent trolls, who grasped the opportunity to collect a lot of patents in



this field. Although these patents would probably be held invalid in court, uncertainty plays in favor of patent trolls, since targets will generally prefer to pay a high license fee, rather than to wait for an uncertain and risky Court outcome.<sup>196</sup>

To conclude, it's important to also mention the “transitional program for covered business methods” created by Section 18 of the AIA. Probably partly to correct the mistakes of the past, this program is an odd concept: “offering the public the opportunity to challenge the validity of certain business method patents,”<sup>197</sup> which are not directed to a technological invention. This kind of measure had never been seen before.

### **5.1.3. High Litigation Costs and Damages**

In the US, the litigation costs and damages for patent infringement are generally higher than in the EU. This makes a big difference for the victims of patent trolls that are confronted with the cornelian dilemma of paying license fees or going to court.

The situation in the US may thus be more “attractive to patent trolls because as mentioned above, in U.S., higher litigation costs incentivize companies to pay royalty rather than fighting against patent trolls.”<sup>198</sup> The litigation costs of a patent infringement claim are estimated at “\$500,000 to over \$4 million for each party,”<sup>199</sup> depending on the amount of money "at risk" in the litigation,<sup>200</sup> and were until recently not reimbursed. The financial interests at stake are thus too high: sometimes it makes no difference in money that you win or lose the case. The incentives are hence to settle most of the NPE infringement claims “amicably” and “out of court”, since patent litigation is “complicated, risky and expensive.”<sup>201</sup>

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<sup>196</sup> See section 2.3. of this paper, *in fine*, p. 21.

<sup>197</sup> Courtenay C. Brinckerhoff, *America Invents Act: Law & Analysis* (2012), p. 5-3.

<sup>198</sup> Joe Brennan, *supra* at 86.

<sup>199</sup> Jennifer K. Gregory, *supra* at 294.

<sup>200</sup> Joseph Farrell & Robert P. Merges, *supra* at 948.

<sup>201</sup> Colleen Chien, *supra* at 1584.

The damages granted in the US are also sometimes astronomically high compared to the situation in Europe; the record is still the *Centocor Ortho Biotech, Inc. v. Abbott Laboratories* decision, resulting in a total USD 1.84 billion patent jury verdict, as the next graph<sup>202</sup> of the 2012 PwC patent litigation study reveals.

**Chart 2c. Top 10 largest initial adjudicated damages awards: 1995–2011**

Year	Plaintiff	Defendant	Technology	Award (in MM)
2009	Centocor Ortho Biotech Inc.	Abbott Laboratories	Arthritis drugs	\$1,848
2007	Lucent Technologies Inc.	Microsoft Corp.	MP3 technology	\$1,538
2010	Mirror Worlds LLC	Apple Inc.	Operating system	\$626
2011	Bruce N. Saffran M.D.	Johnson & Johnson	Drug-eluting stents	\$593
2003	Eolas Technologies Inc.	Microsoft Corp.	Internet browser	\$521
2008	Bruce N. Saffran M.D.	Boston Scientific Corp.	Drug-eluting stents	\$432
2009	Uniloc USA Inc.	Microsoft Corp.	Software activation technology	\$388
2008	Lucent Technologies Inc.	Microsoft Corp.	Data entry technology	\$368
2006	Rambus Inc.	Hynix Semiconductor Inc.	Memory chips	\$307
2009	i4i Limited Partnership	Microsoft Corp.	Electronic document manipulation technology	\$277

Although some suggest that these exorbitant awards are “not the tip of the iceberg of excessive patent damage awards,”<sup>203</sup> but rather “outliers”, the average quantum of damages awarded in the EU remains significantly lower than that in the US. Plausible reasons for this are, firstly, the possibility, provided by Section 284, Title 35 USC, to grant “treble damages” in the US for willful patent infringement.<sup>204</sup> Secondly, the fact that the US represents a bigger market than the whole EU, which is divided into the markets of all the MS until the entrance into force of the unitary patent package, could also be an explanation. Thirdly, the possibility to award punitive damages in the US as patent trolls seem to develop their activities especially in legal systems that do not apply a strict “compensation principle,” but allow rather the granting of benefits beyond the

<sup>202</sup> PwC, *2012 Patent Litigation Study: Litigation continues to rise amid growing awareness of patent value*, p. 8, [http://www.pwc.com/en\\_US/us/forensic-services/publications/assets/2012-patent-litigation-study.pdf](http://www.pwc.com/en_US/us/forensic-services/publications/assets/2012-patent-litigation-study.pdf), (last visited July 28th, 2013)

<sup>203</sup> Michael J. Mazzeo, Jonathan Hillel and Samantha Zyontz, *Excessive or Unpredictable? An Empirical Analysis of Patent Infringement Awards (June 17, 2011)*, p. 35, Available at SSRN: <http://ssrn.com/abstract=1765891>, (last visited July 28th, 2013)

<sup>204</sup> John R. Harris, *Willful Patent Infringement and Treble Damages: The Reason for Legal Opinions*, Morris, Manning & Martin, LLP (2004), p. 1, available at [http://www.mmmlaw.com/assets/files/article\\_234.pdf](http://www.mmmlaw.com/assets/files/article_234.pdf), (last visited July 29th, 2013)

actual damage suffered by the complainant.<sup>205</sup> Reasonable compensation is the minimum standard that a patent troll can obtain in the U.S.:

*Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.*<sup>206</sup>

The American judicial system itself provides, unwittingly with all of these factors, the means for patent trolls to pressure and intimidate their targets. In the United States, trolls may receive more than full compensation of the suffered damages. This makes the American system very attractive for NPE's.

A last factor that also plays in favor of the patent trolls is the pro-patentee attitude of US juries.<sup>207</sup>

## **5.2. A Possible Future “Patent Bubble”?**

As we already have perceived, there are, both in Europe as in the United States, three ongoing evolutions: (1) a rise of the quantity of patents filed and granted, (2) a loss of patent quality, and (3) an overvaluation of patents. These evolutions are stronger in the US than in the EU.

The problem of a bubble could, however, arise when overvaluation of companies is “made on the basis of those patents whose quality has declined, since we can then fear a serious difference between the book value of these patents and their market value.”<sup>208</sup>

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<sup>205</sup> Bernard Remiche, Vincent Cassiers, *supra* at 33.

<sup>206</sup> Title 35 U.S.C. § 284, para. 1.

<sup>207</sup> Rt. Hon. Sir Robin Jacob, *Patent Trolls in Europe – Does Patent Law Require New Barriers?* Address at the May 2008 GRUR Meeting, Stuttgart (2008), p. 2, [http://www.grur.de/cms/upload/pdf/Jahrestagung/2008/GRUR\\_JT2008\\_Rede\\_Jacob\\_2008-05-23.pdf](http://www.grur.de/cms/upload/pdf/Jahrestagung/2008/GRUR_JT2008_Rede_Jacob_2008-05-23.pdf), (last visited July 28th, 2013)

<sup>208</sup> Bernard Remiche, Vincent Cassiers, *supra* at 35.

Hence, patents are becoming a new investment tool.<sup>209</sup> There is a shift in the patent market from that of being illiquid to liquid<sup>210</sup>, which in itself is not a disadvantage to the system.

Although the crisis has not yet materialized, reality can thwart expectations: the manufactured “patent bubble,” similar to the “housing bubble,” then bursts. The situation could then have a dramatic impact on valuations since all the overstatements disappear by a potentially large amount and companies remain with a far smaller balance sheet. It is better to be careful with valuation than to risk being caught out by a de-valuing of the patent holdings of many companies...

## **VI. Likelihood of the Appearance of “Patent Trolls” in the European Union, Regarding the New “EU Unitary Patent Package”**

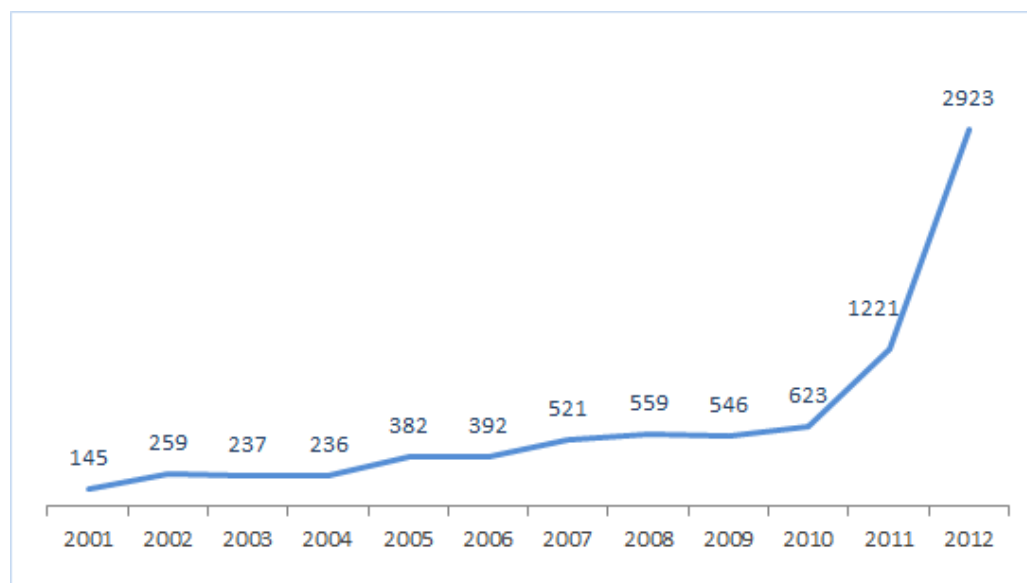
As has been shown, the United States are a more conducive environment for the development of patent trolls. It is therefore not surprising that the number of patent troll litigations has risen there over the past two decades. It is, however, important to keep in mind that this rise is not only to be perceived negatively, as it also means that more and more courageous victims of patent trolls actively defend their interests in Court instead of paying license fees to avoid a lawsuit.

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<sup>209</sup> Russell M. Steinbrenner, *The next bubble: intellectual property, patents and their projected valuation*, p. 1, <http://law.marquette.edu/assets/law-library/pdf/Steinbrenner-award-article.pdf>, (last visited July 28th, 2013)

<sup>210</sup> *Id.*, p. 30.

## Patent Lawsuits Involving NPEs Over Time<sup>211</sup>



Source: PatentFreedom © 2013. Data captured as of January 18, 2013.

Nevertheless, patent trolls seem to already have crossed the Atlantic Ocean and reached Europe. Although this issue is “not” prominent here so far,<sup>212</sup> concrete examples of lawsuits are already evident in our national jurisprudences. The IPCom Company<sup>213</sup> recently won, for instance, a patent infringement lawsuit against Nokia.<sup>214</sup>

In 2012, after there had been years of protracted debates about the creation of a unitary patent system, all MS of the EU (except Italy and Spain that did not agree with the language arrangements) agreed on the “unitary patent package.” The package was proposed by the European Parliament and the Council and consists of three elements:<sup>215</sup>

- ✓ a Regulation creating a European patent with unitary effect (or “unitary patent regulation”);<sup>216</sup>

<sup>211</sup> Available at <https://www.patentfreedom.com/about-npes/litigations/>, (last visited July 28th, 2013)

<sup>212</sup> Joe Brennan, *supra* at 85.

<sup>213</sup> [http://www.ipcom-munich.com/home\\_en.html](http://www.ipcom-munich.com/home_en.html), (last visited July 28th, 2013)

<sup>214</sup> More information about this patent litigation case in Germany available at <http://www.ipeg.eu/nokia-vs-ipcom-ongoing-umts-patent-litigation-in-germany/>, (last visited July 28th, 2013)

<sup>215</sup> European Commission official website, question 1:

[http://ec.europa.eu/internal\\_market/indprop/patent/faqs/index\\_en.htm](http://ec.europa.eu/internal_market/indprop/patent/faqs/index_en.htm), (last visited July 29th, 2013)

<sup>216</sup> REGULATION (EU) No 1257/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection, *O.J.E.U.*, 31 December 2012, L. 361/1-8.

- ✓ a Regulation establishing a “language regime” applicable to the unitary patent (hereafter “language regulation”):<sup>217</sup> all the procedure would be done in “one” of the languages of the European Patent Office. According to Article 14 (1) EPC, these languages are English, French and German. Article 3 of the language regulation refers to Article 14 (6) EPC, which provides that merely a “translation of the claims into the other two official languages of the EPO” is required. So only

*in the event of a dispute relating to an alleged infringement of a European patent with unitary effect, the patent proprietor shall provide at the request and the choice of an alleged infringer, a full translation of the European patent with unitary effect into an official language of either the participating Member State in which the alleged infringement took place or the Member State in which the alleged infringer is domiciled.*<sup>218</sup>

- ✓ an international agreement among Member States setting up a single and specialized patent jurisdiction (the “Unified Patent Court” (UPC));<sup>219</sup> this agreement was signed by Italy<sup>220</sup>, but not by Croatia, Spain and Poland.

The patent package thus enhances cooperation between the 25 participating Member States (+ Croatia: if Croatia joins the enhanced co-operation), creating “unitary patent protection,” i.e. a single patent providing equal protection in these participating MS. This package entered into force in the beginning of 2013, but shall only “apply from 1 January 2014 or the date of entry into force of the Agreement on a Unified Patent Court,

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<sup>217</sup> COUNCIL REGULATION (EU) No 1260/2012 of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection with regard to the applicable translation arrangements, *O.J.E.U.*, 31 December 2012, L. 361/89-92.

<sup>218</sup> Art. 4 (1) of the “Language Regulation”.

<sup>219</sup> AGREEMENT ON A UNIFIED PATENT COURT, 11 January 2013, published by the Council of the European Union, <http://register.consilium.europa.eu/pdf/en/12/st16/st16351.en12.pdf>, (last visited July 28th, 2013)

<sup>220</sup> Although Italy is not a participating member state of the “Unitary Patent Regulation”, the Unitary Patent Court (UPC) will thus be competent to process European patents validated in Italy.

whichever is the later.”<sup>221</sup> Once this package is fully in force and applicable, it will be possible to apply for and obtain “European Patents with Unitary Effect,” i.e. “a legal title ensuring uniform protection for an invention across 25 Member States on a one-stop shop basis.”<sup>222</sup> The creation of the “Unitary Patent” and the UPC needs to take place “simultaneously.”<sup>223</sup> But as the establishment of the UPC will take time, it’s virtually impossible that the whole reform will be in place before end 2014.

## 6.1. Claimed Benefits of the Unitary Patent Reform

The patent reform provoked very different reactions among patent specialists. A first group was very enthusiastic and pointed out the **multiple advantages** of the Unitary Patent Package:

- *lower costs due to beneficial translation requirements;*
- *simplications through central administration;*
- *prosecution through the EPO;*
- *one annual renewal fee;*
- *unitary enforcement over the territories of the Enhanced Cooperation (for the time being: EU without Italy and Spain)<sup>224</sup> (And for the time being, also without Croatia)*

The “Unitary Character” means that the Unitary Patent “may only be limited, transferred or revoked, or lapse, in respect of all the participating Member States.”<sup>225</sup> This can be very advantageous compared to the current European patent system, where revocation or limitation of a patent requires the invalidation of the patent through

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<sup>221</sup> Art. 18 of the “Unitary Patent Regulation”.

<sup>222</sup> European Commission official website: [http://ec.europa.eu/internal\\_market/indprop/patent/](http://ec.europa.eu/internal_market/indprop/patent/), (last visited July 28th, 2013)

<sup>223</sup> Alexander Harguth & Steven Carlson, *supra* at 37.

<sup>224</sup> *Id.*, p. 36.

<sup>225</sup> Art. 3 (2) of the “Unitary Patent Regulation”.

“country-by-country measures involving a multitude of national courts.”<sup>226</sup> One single procedure will be sufficient in the future in the territories of the Enhanced Cooperation. Besides, if the reform simplifies, as expected, the translation regime, “then it would solve the problem of costs and would increase the quality of the system.”<sup>227</sup> Furthermore, the Unitary Patent being incorporated into EU law would make the European Court of Justice (ECJ) the “final arbitrator of unitary patent law,”<sup>228</sup> national courts being bound to follow the ECJ decisions and interpretations.

We see, thus, that there are numerous advantages that the new “reform” can bring to the patent system in Europe: “affordability, cost efficiency, legal certainty, high quality, non-discrimination,”<sup>229</sup> to name but a few. Even the regulation itself is full of praise for the new system:

*Unitary patent protection will foster scientific and technological advances and the functioning of the internal market by making access to the patent system easier, less costly and legally secure. It will also improve the level of patent protection by making it possible to obtain uniform patent protection in the participating Member States and eliminate costs and complexity for undertakings throughout the Union.*<sup>230</sup>

## 6.2. Claimed Disadvantages of the Unitary Patent Reform

Nonetheless, despite the multiple advantages of the new system, the reform did not receive an entirely positive response. A second group pointed out a **number of weaknesses and concerns about the new reform** and we will study the major ones:

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<sup>226</sup> Alexander Harguth & Steven Carlson, *supra* at 38.

<sup>227</sup> Guiseppe Scellato et al., *supra* at 156.

<sup>228</sup> Robert D. Swanson, *Implementing the EU Unified Patent Court: Lessons from the Federal Circuit*, Stanford-Vienna TTLF Working Paper No. 15, p. 18, <http://www.law.stanford.edu/organizations/programs-and-centers/transatlanticttechnology-law-forum/ttlf-working-paper-series>, (last visited July 28th, 2013)

<sup>229</sup> Guiseppe Scellato et al., *supra* at 146.

<sup>230</sup> Recital (4) of the “Unitary Patent Regulation”.



A first weakness is the fact that the unitary patent is “optional.” The Unitary patent is deemed to coexist with the “classical” European patent, i.e. a bundle of national patents centrally granted,<sup>231</sup> and the national patents themselves. As provided by recital 27 of the Unitary Patent Regulation:

*This Regulation should be without prejudice to the right of the participating Member States to grant national patents and should not replace the participating Member States’ laws on patents. Patent applicants should remain free to obtain either a national patent, an European patent with unitary effect, a European patent taking effect in one or more of the Contracting States to the EPC or a European patent with unitary effect validated in addition in one or more other Contracting States to the EPC which are not among the participating Member States.*

The Unitary patent thus does not replace the existing patent rights.<sup>232</sup> Instead of making the system easier, this could create extra confusion and complexity. And we all know that confusion doesn’t make the quality of the system better.

A second concern is the additional territorial and substantive fragmentation created by the patent reform in the EU. Not only are some MS not participating in the Enhanced Cooperation, but different national laws will apply to different unitary patents. As article 7 of the Unitary Patent Regulation provides, a unitary patent “shall be treated in its entirety and in all the participating Member States as a national patent of the participating Member State in which that patent has unitary effect [...]”. Hence, the unitary patent package “misses an opportunity to provide for a minimum of uniformity

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<sup>231</sup> Stephan Gruber, *Europäisches Und Internationales Patentrecht: Einführung Zum Europäischen Patentübereinkommen (epÜ) Und Patent Cooperation Treaty (pct)*. 7. (neu bearb. Aufl. 2012), p. 2.

<sup>232</sup> Robert D. Swanson, *supra* at 17.

and transparency for market actors.”<sup>233</sup> De facto, it means that the reform would miss its main “harmonization” objective.

A final concern raised was that the new single enforcement system may be a “boon”<sup>234</sup> for patent trolls. Directly after the package was voted, a very popular topic in many newspaper articles<sup>235</sup> was to underline the possible rise of patent trolls in Europe caused by the new reform. This alleged weakness is naturally of particular interest for our research:

*Allowing the enforcement of a patent across Europe from a single location of the holder's choice, raises the stakes for technology and other businesses as it leaves them open to a possible EU wide attack while reducing the costs for those doing the attacking.*<sup>236</sup>

It seems clear that the advantages of the reform, e.g. reduced costs and procedural simplifications, are advantages for patent trolls as well and thus, *in fine*, also weaknesses of the system. The market protected with one unitary patent, for example, is much bigger, but it also provides a much bigger playground for patent trolls. Benefits could at the same time be drawbacks. Moreover, the reform doesn't address compulsory licenses issues, prior user rights or research exceptions. This also depreciates the system and plays in favor of the patent trolls:

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<sup>233</sup> Reto M. Hilty et al., *The Unitary Patent Package: Twelve Reasons for Concern*, Max-Planck Institute (2012), <http://www.unitary-patent.eu/content/unitary-patent-package-twelve-reasons-concern-max-planck-institute>, (last visited July 28th, 2013)

<sup>234</sup> Richard Willoughby, *EU Unitary Patent has obvious flaws: Patent package gives technology and other sectors cause for concern*, the guardian, 19 December 2012, <http://www.theguardian.com/law/2012/dec/19/eu-unitary-patent-and-technology-sector>, (last visited July 28th, 2013)

<sup>235</sup> One example among others available at: <http://www.zdnet.com/troll-warning-as-eu-gets-unitary-patent-scheme-after-decades-of-failure-7000008672/>, (last visited July 28th, 2013)

<sup>236</sup> *Id.*

*The insufficiency of exceptions and limitations as well as the absence of countervailing rights in the UP Regulation render the unitary patent prone to “opportunistic” behavior.*<sup>237</sup>

### **6.3. Correction of the Mistruths**

Although we could now conclude from the elements of the previous section that the “unitary patent package” effectively will result in a rise of patent trolling in Europe in the next decade, it’s relevant to take a closer look at the reform to dispel possible journalistic misinformation.

#### (1) The Unitary patent facilitates the patenting of computer programs:

This is a pure myth. As the European Commission (EC) likes to recall “the patentability requirements for European patents with unitary effect are identical to those of “classical” European patents. The envisaged regulation on unitary patent protection does not contain any particular disposition or derogation on the patentability conditions for inventions.”<sup>238</sup> The reform doesn’t make software patents, highly appreciated by patent trolls, easier to get. Thus, no risk exists to see any “new” issue concerning this contentious (non-)patentable category.

#### (2) The EU unitary package doesn’t take any measures to prevent patent troll activities, rather, it encourages troll activities:

This is also a falsehood. Although it’s true that the new reform is probably not “perfect” as it’s a compromise, the Unitary Patent Package contains a lot of “procedural

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<sup>237</sup> Reto M. Hilty et al., *supra* at subparagraph n° 6.

<sup>238</sup> European Commission official website, question 21:

[http://ec.europa.eu/internal\\_market/indprop/patent/faqs/index\\_en.htm](http://ec.europa.eu/internal_market/indprop/patent/faqs/index_en.htm), (last visited July 29th, 2013)

and structural safeguards”<sup>239</sup> to prevent this type of misuse of the patent system. All these measures should discourage patent trolls to practice within the UPC.

The following could be listed as procedural safeguards: “(a) the mandate that the losing party must pay attorney fees, (b) limitations on the joining of multiple defendants, (c) discretionary injunctions, (d) limited discovery, and (e) a rule of proportionality and fairness.”<sup>240</sup>

(a) Although, one can see that the first safeguard is a double-edged sword, the other mentioned safeguards are very useful. With the recent “Shield Act”<sup>241</sup> of 2013, the same “recovery of litigation costs” provision is established in the American system for high tech innovations. There is thus no big difference between our article 69 UPC<sup>242</sup> and the United States. This is, however, a good example of concrete actions taken recently by the U.S. authorities against trolls.

(b) The limitation on the joining of multiple defendants is a second good example of the U.S. trying to ameliorate their system. The AIA provided for this in 35 U.S.C. § 299. In Europe, the rule is established in article 33 of the UPC agreement: “An action may be brought against multiple defendants only where the defendants have a commercial relationship and where the action relates to the same alleged infringement.”<sup>243</sup> This is a very good safeguard, since, as we already mentioned in the second chapter of this paper, patent trolls typically target multiple defendants at the same time to reduce their litigation costs.

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<sup>239</sup> Edward Kelly & Christopher Carroll, *How The EU Patent Court Will Protect Against Trolls*, Ropes & Gray LLP, 2013, p. 1.

<sup>240</sup> *Id.*, p. 2.

<sup>241</sup> Saving High-tech Innovators from Egregious Legal Disputes Act of 2013, *available at* <http://www.gpo.gov/fdsys/pkg/BILLS-113hr845ih/pdf/BILLS-113hr845ih.pdf>, (last visited July 29th, 2013)

<sup>242</sup> Art. 69 (1) UPC : “Reasonable and proportionate legal costs and other expenses incurred by the successful party shall, as a general rule, be borne by the unsuccessful party, unless equity requires otherwise, up to a ceiling set in accordance with the Rules of Procedure.”

<sup>243</sup> Art. 33 (1) (b) UPC.

(c) Article 63 of the UPC agreement provides for the following safeguard: “Where a decision is taken finding an infringement of a patent, the Court may grant an injunction against the infringer aimed at prohibiting the continuation of the infringement.”<sup>244</sup> The use of the term “may” is very important as it makes clear that the grant of an injunction, when there is infringement, is not automatic. It is rather a discretionary decision of the Court. This is a fundamental provision, as the threat of a permanent injunction was one of the major reasons why targets preferred to settle the dispute out of court. By inserting this rule, the UPC “eliminates a major weapon of abusive NPEs.”<sup>245</sup> We have to add that since the *eBay Inc. v. MercExchange* case in 2006, the situation is the same in the United States. In this case, the Supreme Court held, for the first time regarding patent infringement,<sup>246</sup> that “the decision whether to grant or deny injunctive relief rests within the equitable discretion of the district courts, and that such discretion must be exercised consistent with traditional principles of equity.”<sup>247</sup> Courts apply a “four-factor test,”<sup>248</sup> but the injunction is permissible rather than automatic. The sword of Damocles, i.e. the powerful threat of an injunction, doesn’t hang anymore “automatically” over the head of companies that have to bargain with patent trolls. This restores fairer balance between the parties.

(d) The limited discovery safeguard is uniquely European. Article 53 of the UPC agreement provides for a much less stringent evidence production than in the

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<sup>244</sup> Art. 63 (1) UPC.

<sup>245</sup> Edward Kelly & Christopher Carroll, *supra* at 3.

<sup>246</sup> In the argumentation of the court, clear reference is made to similar “copyright” cases.

<sup>247</sup> *eBay Inc. v. MercExchange LLC*, 547 U.S. 388 (2006), decision available at <http://www.supremecourt.gov/opinions/05pdf/05-130.pdf>, (last visited July 29th, 2013)

<sup>248</sup> “A plaintiff must demonstrate (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as money damages, are inadequate to compensate for that injury; (3) that considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.” *eBay Inc. v. MercExchange LLC*, 547 U.S. 388 (2006).

U.S. system. It is a good measure, as discovery and evidence production create high transactional costs for the parties, who would rather prefer to avoid this cost by settling the case out of court. This also prevents the costs for the parties from becoming excessively high.

(e) The “rule of proportionality and fairness” is of inestimable value in the fight against patent trolls. Article 42 of the UPC agreement provides that “(1) The Court shall deal with litigation in ways which are proportionate to the importance and complexity thereof. (2) The Court shall ensure that the rules, procedures and remedies provided for in this Agreement and in the Statute are used in a fair and equitable manner and do not distort competition.” The European Patent Court may thus take into consideration the fact that one of the parties is a “pure” patent troll that is misusing the system. This measure could ruin all the “abusive” trolling activities, but one will have to wait to see the concrete interpretation and application of this rule in order to draw the appropriate conclusions.

The UPC agreement also contains structural safeguards. Concrete examples<sup>249</sup> are that the European Patent Court decisions will be made by (a) judges, who are (b) appointed and (c) trained.

(a) There are no juries in the European system, and instead judges. This makes the European system a bit more “professional,” e.g. “judges are more likely to be adept at applying policies behind the misuse doctrine<sup>250</sup> to particular facts,”<sup>251</sup> and avoids forum shopping to find pro-patentee juries.

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<sup>249</sup> Edward Kelly & Christopher Carroll, *supra* at 3.

<sup>250</sup> See next chapter for an explanation of the “misuse doctrine”.

(b) The judges are appointed for a renewable period of 6 years<sup>252</sup> by an administrative committee observed by the European Commission.<sup>253</sup> One could thus imagine that judges being too lax with abusive litigants would not be re-appointed, unless there is a strong pro-troll lobby at the EC, which is highly improbable.

(c) A training framework for judges should also be set up to ensure the consistency of the Court's case law, as established by article 19 of the UPC agreement. The judges will thus be specialized and more up to date with the technical aspects of patent law. One could imagine that they will also be more prepared to detect and identify “pure” abusive litigations but, once again, we have to wait to see concrete applications of the measure before drawing the appropriate conclusions.

The EU unitary patent package is thus full of constructive measures. Contrary to the predominant opinion, the UPC thus seems “well positioned to prevent abusive NPEs from engaging in abusive and meritless patent litigation.”<sup>254</sup>

#### **6.4. The Main Issue is Not Really NPEs?**

The real problem of the patent system could be somewhere else. It is not the NPEs, nor the new EU package, which appears rather well on track, the cause of all the trouble. A popular belief is that “it’s the NPEs that impede innovation as they don’t

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<sup>251</sup> *Intellectual Property Misuse: Licensing and Litigation*, Chicago, Ill.: Section of Antitrust Law, American Bar Association, 2000, p. 118.

<sup>252</sup> Annex I, Art. 4, UPC.

<sup>253</sup> Art. 12 UPC.

<sup>254</sup> Edward Kelly & Christopher Carroll, *supra* at 1.

practice their inventions, but destroy the balance of powers<sup>255</sup> in the industry and are active litigators.” This is, however, not totally correct;<sup>256</sup> a lot of IP rights acquired by NPEs are bought from inventors not using these rights themselves and who are glad to sell them. NPEs thus foster innovation and, as they license the rights, also make them broadly available. Actually, their role on the IP system can be very useful, as they destroy anticompetitive structures by being ready to license the rights to multiple licensees and are not interested in restrictive cross-licensing agreements; they thus help to open the market.

Good lawyers making, without abuse, the management of IP rights their main business activity, are in a perfectly honorable position. NPEs take advantage of the deficits of the patent systems, and that’s perhaps the most shocking element for the patent offices and other government authorities. But the question of whether this attitude is right or wrong is purely “ethical;” it is thus not our place to comment on this issue.

Nonetheless, it’s our role to point out the deficiencies of the system, resulting in bad quality patents being granted and the resulting frivolous patent lawsuits. The new EU unitary patent package does not seem underprovisioned to treat these issues, so one has to give it a chance. Only a “test” of the system will allow us to judge if it’s a failure or not. Don’t shoot the ambulance that is trying to better the system. Moreover, the expected 80% cost reduction figure is based on an assumption that users want and will apply for pan-EU protection.<sup>257</sup> We should thus not be worried and instead encourage patent owners and inventors to utilize the new system.

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<sup>255</sup> Deborah Perry Piscione, *Secrets of Silicon Valley: What Everyone Else Can Learn from the Innovation Capital of the World*, New York: Palgrave Macmillan (2013), p. 92.

<sup>256</sup> Sascha Salomonowitz, Presentation at Universität Wien, Faculty of Law: IP Licensing and Technology Transfer in Europe and International (19 March 2013)

<sup>257</sup> Richard Willoughby, *supra*.



It is true, however, that the reform may seem in some aspects a bit too “pro patentee.”<sup>258</sup> Of course, we seek to reach a fair and balanced system, which is not yet totally achieved by the reform, but it’s too easy to criticize the fact that due to the reform NPEs will be able to sue with Europe-wide effect. One must realize that if the patent is valid and strong, the fact that it is owned and defended by the original inventor or by an “honest” NPE doesn’t make much difference nor create any problems. It is only if one starts from the premise that the patents are weak and the NPEs all opportunists, that there is real trouble. The real issue is thus not the NPEs, rather the weak patents themselves. We must tackle the problem at its source, by bettering the standard of patent granting.

With the Unitary patent package, the European Union seems, in our eyes, to have searched and reached a good balance between the interests of the patent holders and the interests of third parties. The situation will certainly not become as critical as in the United States, as many weaknesses<sup>259</sup> of the US patent system were, *ab initio*, taken into consideration to draft this reform.

Harmonization and (Enhanced) Cooperation on an EU level can only raise the overall quality of the patent protection in Europe. We, as committed Europeans, truly believe that “integration” is not what leads to problems, it is quite the contrary.

## **VII. Remedies Against “Abusive” Patent Troll Claims**

Although we can conclude from the previous chapter that NPEs, since their activities can be very laudable, are not, *per se*, the main issue of the patent system it is still important to provide the potential targets of NPEs with some remedies that they can use

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<sup>258</sup> Ian Starr, *The unitary patent – what is it and where is it going?* (2013), available at <http://www.lexology.com/library/detail.aspx?g=6c5a41b4-cda2-4438-afa9-bb1b725f93fa>, (last visited July 29th, 2013)

<sup>259</sup> See chapter V. of this paper, p. 42.

when confronted with purely “abusive” patent troll claims, and to submit to the legislator new ideas to better the current and proposed system.

## **7.1. Various Remedies for Patent Troll Victims**

Besides the more traditional remedies, such as the declaration of non-infringement, invalidity or non-essentiality, the presumed infringers have a lot of other less “classical” strategies or defenses. Hereunder we will browse, roughly, a non-exhaustive list of existing and emerging remedies in the U.S. and in the EU.

### **7.1.1. Defensive Patenting: A Strategy to Avoid Lawsuits**

A first strategy that companies can adopt to avoid becoming patent troll targets is to engage in “defensive patenting.” Big companies decided to unite themselves against patent troll activities by creating companies that will defend their IP rights.<sup>260</sup> Two examples of this kind of companies are “Allied Security Trust,”<sup>261</sup> having members such as Google, Intel, IBM, and Sony, and “Rational Patent Exchange Corp.,”<sup>262</sup> regrouping, amongst others, eBay, Samsung and Dell Inc. Although, these companies have the same business model, characteristics and structure as patent trolls, the difference is that they are created to fight back patent trolls by competing on the same market. We could say that these companies are in fact “tolerated contra-trolls” as they promise not to file lawsuits against their members<sup>263</sup> and are supposed to do patent valorization in “good faith.” Clustering to better defend themselves, that’s the idea: *l’union fait la force.*<sup>264</sup>

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<sup>260</sup> Charles Descazeaux, *supra* at 1.

<sup>261</sup> Official website : <http://www.alliedsecuritytrust.com/>, (last visited July 29th, 2013)

<sup>262</sup> Official website : <http://www.rpxcorp.com/>, (last visited July 29th, 2013)

<sup>263</sup> A creative US lawyer going up against these “tolerated contra-trolls” in the US Supreme Court, could attempt to argue that it is a horizontal agreement between competitors and thus collusion, depending on how the patents are used by them.

<sup>264</sup> National motto of Belgium, expression used in Charles Descazeaux, *supra* at 1.

Other big multinationals have gone even further, making use of the services of notorious identified patent trolls:<sup>265</sup> this is for example the case for “Microsoft and Nokia, which transferred more than two thousand patents to *Mosaid*,<sup>266</sup> and Ericsson to *Unwired Planet*.”<sup>267</sup> Paul Belleflamme, economy Professor at the Louvain school of Management (LSM, Belgium), calls such companies “privateer-ships:”<sup>268</sup> as privateer ships in war time, the activities of patent protection are subcontracted to these companies who have to attack possible infringers in exchange for financial compensation. We have already observed that this subcontracting can be very advantageous as patent trolls don’t manufacture anything and are therefore insensitive<sup>269</sup> to counterclaims.

### **7.1.2. Taking Initiative<sup>270</sup>: Avoidance of Forum Shopping**

Another solution to weaken the position of abusive patent trolls is to take the initiative and to control potential threats. By initiating proceedings to invalidate potentially threatening patents, where the patent troll has not yet done so, you avoid the patent troll of practicing “forum shopping” and, even more, you can reverse the situation by choosing a forum that is unattractive to the NPE. In fact, you are then imposing a part of the rules of the game.

### **7.1.3. Misuse Doctrine as a Defense?**

A “complex” defense that parties could invoke in Court, when the counterparty violates antitrust laws or inadequately attempts to extend the scope of the patent,<sup>271</sup> is

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<sup>265</sup> Paul Belleflamme, *Les corsaires de brevets*, La Libre Belgique, Aug. 5, 2013, p. 25.

<sup>266</sup> Official website : [www.mosaid.com/](http://www.mosaid.com/), (last visited July 29th, 2013)

<sup>267</sup> Official website : <http://www.unwiredplanet.com/>, (last visited July 29th, 2013)

<sup>268</sup> Paul Belleflamme, *supra* at 25.

<sup>269</sup> *Id.*

<sup>270</sup> Sascha Salomonowitz, Presentation at Universität Wien, Faculty of Law: IP Licensing and Technology Transfer in Europe and International (19 March 2013)

the misuse doctrine. The term “patent misuse” refers to “an affirmative defense to an action for patent infringement or for royalties under a license.”<sup>272</sup> However, “patent misuse” is not *per se* subject to prosecution; abusive conduct<sup>273</sup> is required and must be established by the presumed infringer. If this succeeds, this defense is very powerful as “a finding of misuse precludes prospective injunctive relief and eliminates any damage award (either lost profits or reasonable royalties) for the period during which the misuse occurred.”<sup>274</sup> In other words, the “infringer” would avoid the obligation of having to pay high license fees for that period. This defense is thus very effective but is perhaps not that easy to prove.

#### **7.1.4. Competition Law as a Defense?**

European competition law may help to address the problem of patent trolls and unreasonable royalty demands<sup>275</sup>. The question could indeed be raised as to whether patent trolls that sue multiple targets are not committing an “abuse of dominance.” Article 102 of the TFEU provides that “any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.” This defense could be invoked in patent troll cases, but of course only if the patentee has a “dominant position” on the relevant market.<sup>276</sup>

When the patent troll is dominant, he could be abusing within the market of his exclusive property right to the invention. But, can legal prosecution be considered as an

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<sup>271</sup> *Intellectual Property Misuse: Licensing and Litigation*. Chicago, Ill.: Section of Antitrust Law, American Bar Association, 2000, p. 1.

<sup>272</sup> *Id.*

<sup>273</sup> *Id.*, p. 2.

<sup>274</sup> *Id.*

<sup>275</sup> P. Chappatte & Walter P., *European Competition law, Non-Practicing Entities, and Frand Commitments*, in Steven D. Anderman & Ariel Ezechai, *INTELLECTUAL PROPERTY AND COMPETITION LAW: NEW FRONTIERS* (Oxford University Press 2011), p. 373.

<sup>276</sup> Notion largely defined by the ECJ; see e.g. Case 27/76 United Brands.

abuse? The Court of First Instance (of the ECJ) held in 1998 that are an abuse of dominance the legal proceedings that:

*“cannot reasonably be considered to be an attempt to assert the rights of the undertakings and can therefore only serve to harass the opposing party and that (...) were conceived in the framework of a plan whose goal was to eliminate competition.”*<sup>277</sup>

A successful case of misuse of the patent system as an “abuse of dominance” can be found in the pharmaceutical sector;<sup>278</sup> in the *Astra Zeneca v. Commission* case, the ECJ<sup>279</sup> upheld the General Court’s judgment and, *in fine*, the misuse of the patent system was recognized as a violation of article 102 TFEU. But it’s difficult to fulfill all the conditions of the *Promedia*-case.

One may also ask themselves whether the refusal to grant a license is an abuse within the meaning of Article 102 TFEU. However, the problem of patent trolls is not here since, as already studied, patent trolls are eager to grant licenses, presumably at a high price. The issue is thus more the excessive license fees. Are they contrary to the European Competition law? We do not wish to make a particularly big issue of this since the European legislation already provided a solution: *Article 101 and 102 TFEU require FRAND licensing*<sup>280</sup>, i.e. licensing on “fair, reasonable, and non-discriminatory terms” terms. Thus patents must be licensed on FRAND terms, especially, for example, when they are “declared essential to a standard.”<sup>281</sup>

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<sup>277</sup> CFI, *ITT Promedia NV. v. Commission*, 17 July 1998, Case T-111/96, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61996TJ0111:EN:HTML>, (last visited July 29th, 2013); and Marie Mustin, *supra* at 82.

<sup>278</sup> Steven D. Anderman, *The Interface between Intellectual Property Rights and EU Competition Law*, in *Common Principles of European Intellectual Property Law*, (A. Ohly 2012), p. 241.

<sup>279</sup> ECJ, *AstraZeneca v Commission*, 6 December 2012, Case C-457/10 P.

<sup>280</sup> P. Chappatte & Walter P., *supra* at pp. 378-380.

<sup>281</sup> *Id.*, p. 378.

### 7.1.5. Consumer Protection as a Defense?

Recently, in May 2013, the attorney general (AG) of the state of Vermont came up with the idea to sue a patent troll under the Consumer Protection Act. Although the patent system is ordinarily an exclusive federal law jurisdiction competence, AG William Sorrell established a tactic: “If a troll makes a threat in bad faith, that is a violation of state consumer protection laws.”<sup>282</sup> This would give the victims of frivolous claims the right to sue the trolls for bad faith in State courts. Funnily enough, the AG seems, in fact, to play the same game as patent trolls: “AGs are daring the trolls to wage an expensive legal battle against them to prove them wrong, or pay fines and go home.”<sup>283</sup> What an amusing turnaround.

The State of Vermont went even further by adopting an “anti-troll Act.”<sup>284</sup> This act establishes a number of “bad faith assertions of patent infringement.” The most important are listed hereunder:

- *If the demand letter sent by the alleged patent troll does not include specific allegations of how the Vermont company’s technology infringes particular claims in the patent, that is an indicator of bad faith.*
- *If the demand letter sent by the alleged patent troll demands that the Vermont company pay a license fee within an unreasonably short period of time, that is an indicator of bad faith.*
- *If the demand letter sent by the alleged patent troll is deceptive, that is an indicator of bad faith.*

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<sup>282</sup> *How Vermont could save the nation from patent trolls? Available at: <http://www.washingtonpost.com/blogs/the-switch/wp/2013/08/01/how-vermont-could-save-the-nation-from-patent-trolls/>, (last visited July 29th, 2013)*

<sup>283</sup> *State Consumer Protection Laws Unleashed on Patent Trolls, Available at: <http://www.patentspostgrant.com/lang/en/2013/08/state-consumer-protection-laws-unleashed-on-patent-trolls#sthash.1WzUywQi.dpuf>, (last visited July 29th, 2013)*

<sup>284</sup> Full text of the bill, H.299, available at <http://www.leg.state.vt.us/docs/2014/bills/Passed/H-299C.pdf>, (last visited July 29th, 2013)

- *If the alleged patent troll knew or should have known that the claim of patent infringement is meritless, that is an indicator of bad faith.*<sup>285</sup>

This Act could be an effective deterrent against abusive patent troll claims. The AG of the State of Nebraska, Jon Brunning, inspired by Vermont’s efforts, warned an alleged patent troll to leave Nebraska businesses alone,<sup>286</sup> and other States could follow the example in the future, provided that the Consumer Law “trick” doesn’t “fall prey to preemption, the legal principle that bars states from interfering with the enforcement of federal law.”<sup>287</sup> So, the idea is still extremely new. Therefore, until there is a concrete application of this Act and clarification as whether there is preemption or not, it is too early to measure the impact of this very innovative idea. However, it could also give ideas to European countries to tackle, in a similar way, the patent troll problem.

#### **7.1.6. Ignoring Patents**

This is not really a solution against patent trolls but at least in the U.S., could be a strategy to avoid “treble damages.” Have you never wondered why companies continue making products in patent-intensive industries at all?<sup>288</sup> The answer is sometimes that they simply ignore patents and the possible infringement threats. By not reading patents, they could never be accused of being willful infringers and thus never obliged to pay treble damages in the U.S. So the best strategy for them is to “ignore the first cease-and-desist letter”<sup>289</sup> received from a patent owner and, if the chances are too high to face a lawsuit, to accept to pay “hopefully reasonable” license fees. In fact, to adopt

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<sup>285</sup> *Vermont House and Senate Approve Legislation Prohibiting Bad Faith Patent Infringement Claims*, Available at: <http://www.drm.com/news/2013/05/17/vermont-house-and-senate-approve-legislation-prohibiting-bad-faith-patent-infringement-claims/>, (last visited July 29th, 2013)

<sup>286</sup> *How Vermont could save the nation from patent trolls?* Available at: <http://www.washingtonpost.com/blogs/the-switch/wp/2013/08/01/how-vermont-could-save-the-nation-from-patent-trolls/>, (last visited July 29th, 2013)

<sup>287</sup> *Id.*

<sup>288</sup> Dan L. Burk & Mark A. Lemley, *supra* at 31.

<sup>289</sup> *Id.*, p. 32.

this strategy, companies should preferably foresee the possible future costs, by considering patent infringement claims as prospective transactional costs,<sup>290</sup> and thus allocate sufficient funds to anticipate this problem.

## **7.2. Potential Legal Solutions: Anti-troll Measures<sup>291</sup>.**

### **7.2.1. Tightening up the “Industrial Exploitation” Obligation?**

As we previously mentioned, in the third chapter of this paper, the “exploitation” obligation has been reduced to almost nothing. Nowadays, it is, practically speaking, merely a theoretical concept. A legislative tightening of this obligation could be helpful to reduce patent troll operations in the U.S. and to prevent the arrival of more of them in Europe if this is really what we wish to aim to do. By not exploiting their patents, trolls “misuse” the original patent protection philosophy and have the advantage that they do not fear counter-claims. An increased standard of exploitation would oblige NPEs to become “PEs,” to grant compulsory licenses,<sup>292</sup> or to even lose their patent. Legally strengthening this standard would thus be a first way of eradicating abusive trolling activities, but also truthful IP valorization firms.

### **7.2.2. Taxation?**

Another efficient legal measure that could be taken to eradicate, or at least scale down “trolling” activities, is to increase the taxation of trolling businesses at different levels. Although this is a hypothetical idea, and the concrete application should be analyzed by economists to see if it is a realistic one, a first stage where we could tax, at least indirectly, patent trolls is by taxing at a high rate the transfer of IP rights from

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<sup>290</sup> V. Rajkumar, *supra* at 36.

<sup>291</sup> Again, I would like to highlight that these measures are not, in our eyes, tackling the root of the problem. Patent troll activities can be ethically contestable, but are not legally wrong, unless they are “abusive”. Taking actions against abuses, i.e. excessive patent litigation, is a good idea, but tackling all the NPEs, also those that honestly and professionally valorize IP rights, is an improper and stubborn attitude.

<sup>292</sup> See footnotes 101 and 102.



practicing market players to NPEs. A second stage consists of charging high annual fees that must be paid to keep the patent from expiring. This way, “obsolete patents expire sooner, generally before they fall into the hands of those who would misuse them.”<sup>293</sup> In Europe, these total fees are already much higher than in the US, so it could be a good first measure to take by the US legislator. This would create an additional non-negligible direct cost for NPEs and hence make the playground less attractive for them.

For the sake of completeness, as discrimination is prohibited, it should be noted at the outset that this higher tax rate would have an influence on every patent holder, not only aggressive patent trolls. Patent protection will be more expensive for everyone, so perhaps it’s not an ideal measure and a balance should be found.

### **7.2.3. Prohibition of “Patent Trolling” as such?**

It seems that in 2013, as observed above, the authors of the “misuse doctrine” and the States of Vermont and Nebraska could already have showed us the way to follow. The European Union could take an act prohibiting excessive patent litigation, patent abuse and bad faith. It’s that simple. This would be a direct way to sanction “abusive” patent trolls, and *in fine* to eradicate them. A well-structured and well-worded legal document would not harm trustworthy patent plaintiffs, e.g. small inventors and also some NPEs, but have impact on “abusive patent trolls.” Although it will be complex to find the correct balance, the establishment of such an Act is desirable. Article 42 of the UPC agreement already goes along the same lines, but arguably does not go far enough. The near future certainly holds new challenges, developments and evolutions with regards to this issue.

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<sup>293</sup> James E. Bessen & Brian J. Love, *Tax the patent trolls: Column*, USA Today, Jul. 24, 2013 available at <http://www.usatoday.com/story/opinion/2013/07/24/tax-patent-trolls-lawsuits-column/2578675/>, (last visited August 1<sup>st</sup>, 2013)

## Conclusion

In the preceding pages, we tried to provide an accurate picture of the patent troll phenomenon in the United States and in Europe. Although these companies are, originally, typically American, we noticed that some of them have already “crossed the Atlantic” and are active in Europe. The topic being thus relatively new and uncertain on our continent, it is important to master a large number of concepts and legal rules in order to acquire a good overview of the subject. The problem of patent trolls cannot be analyzed without a clear understanding of the patentability conditions in both legal systems, the existing differences, and statistic studies on the functioning of the respective patent offices. This thesis thus complements the many American studies on patent trolls and the few critical analyzes of the new “EU unitary patent package.” It certainly does not claim to provide a complete or perfect answer to the topic, but attempts to provide an input for debate and to denounce some of the various mistruths heard on patent trolls themselves and the new EU reforms.

Which main conclusions and lessons can therefore be drawn from this study?

The **first conclusion** will no doubt be the difficult identification of “patent trolls.” The reasons for this problem are: (1) the various different definition attempts of this concept, some pejorative, some neutral, and (2) the use of the term in a very broad sense; regarding some definitions, every patent plaintiff could be considered as a “patent troll.” The term is thus trivialized these days and should, in our eyes, only be used to define “abusive patent litigants.” For other plaintiffs that are not practicing their patents, the use of the more neutral term “non-practicing entity (NPE)” should prevail.

The **second conclusion** refers to the differences between the patentability systems on both continents. First of all, there seems to be subtle differences in the interpretation and application of the patentability conditions; the U.S. “non-obviousness” standard seems to be laxer than the European “inventive step” requirement, and the U.S. concept

of “utility” is much broader than the European “Industrial application” standard. However, the American patentability conditions have undergone a considerable reform in 2011 with the Leahy-Smith America Invents Act (AIA), and so it is probable that a change for the better could happen. Secondly, due to these differences, some unpatentable areas in the European Union are patentable subject matter in the United States; “software” and “business methods” are questionable patent subject matter, but are accepted in the United States<sup>294</sup>. This has a big impact regarding our topic, since “the holdup or troll problem is particularly significant in component-driven industries, notably information technology (IT),”<sup>295</sup> where software and business methods are indispensable. Moreover, this issue, combined with the high litigation costs and awarded damages, thus shows that the American system is clearly a much more attractive playground for patent troll activities than Europe.

The **third conclusion** is the acknowledgement that the patent troll issue seems to be a more “ethical” than “legal” question. Although ethically questionable, as patent trolling activities are contrary to the original patent philosophy, these activities are not unlawful. Moreover, we observed that patent trolls could also be beneficial for the economy and society, as they are helpful intermediaries for individual inventors and small and medium-sized enterprises (SMEs) to achieve financial returns from their patents. Should we than not rather call them “patent angels”?

**Fourthly**, it’s important to highlight that, in our eyes, the likelihood of the appearance of patent trolls in the European Union is not high. The new “EU unitary patent package” has a lot of advantages, especially monetary and procedural if we compare it with the current system<sup>296</sup>, and contains multiple safeguards to prevent

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<sup>294</sup> See the multiple shifts of balance described in Chapter 5, p. 42.

<sup>295</sup> Mark A. Lemley, *Are Universities Patent Trolls?* (April 11, 2007), Fordham Intellectual Property, Media & Entertainment Law Journal, Vol. 18, p. 532, 2008; Stanford Public Law Working Paper No. 980776. Available at SSRN: <http://ssrn.com/abstract=980776>, (last visited July 29th, 2013)

<sup>296</sup> See **Annex 3**, p. 76.

patent abuses. Although it's a balanced compromise, the package seems well positioned to prevent abusive trolling activities in Europe. One should thus give it a try.

Finally, the **last conclusion** contains the core idea of this study. After all this research, and although we examined some remedies that defendants could use against patent trolls, we cannot help but notice that the main problem of the patent system are probably not the patent trolls themselves. "For instance, many blame non-practicing entities (NPEs) for a majority of the problems with the patent system. But they bring only a minority of patent suits."<sup>297</sup> The main issue of the patent system seems rather to be the "overburdened" patent offices, the resulting "weak patents" granted and the "overvaluation" of patents. We have to tackle the problem at the source as patent trolls take advantage of these deficiencies of the system, and so it is these deficiencies that we should try to solve. NPEs, such as lawyer's offices, having as their main activity the management of IP rights are entirely laudable. It is the abuses by some NPEs, but also by practicing entities, that harm the system and discredit the activities of all the other IP-valuing companies on the market.

As we have observed, President Obama announced earlier in 2013 that drastic measures would be taken in the U.S. to counter "abusive" patent troll activities. In Europe changes will also occur with the entry into force of the new unitary patent package. It seems thus that many things are being done to counter "abusive" trolling "activities" in the near future. We believe that this tackling of the "abuses" is a better solution than targeting the new "IP valuing market", and one logical extra step towards market capitalism. "*Save the trolls, but sanction their abuses*" is our message.

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<sup>297</sup> Colleen Chien, *supra* at 1572.

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**ANNEX 1: Example from a "Submarine Patent".**

(Lemelson's United States Patent n° 5,128,753: patent granted in 1992, but date of priority already since 1954)  
 source: <http://www.google.qm/patents?id=qgEjAAAAEBAJ&printsec=frontcover&img=1&zoom=1> (last visited July 17th, 2013))



US005128753A

**United States Patent** [19]  
**Lemelson**

[11] **Patent Number:** **5,128,753**  
 [45] **Date of Patent:** \* **Jul. 7, 1992**

[54] **METHOD AND APPARATUS FOR SCANNING OBJECTS AND GENERATING IMAGE INFORMATION**

[76] **Inventor:** Jerome H. Lemelson, 85 Rector St., Metuchen, N.J. 08841

[\*] **Notice:** The portion of the term of this patent subsequent to Nov. 6, 2007 has been disclaimed.

[21] **Appl. No.:** 453,789  
 [22] **Filed:** Dec. 20, 1989

**Related U.S. Application Data**

[60] Continuation of Ser. No. 411,402, Sep. 22, 1989, Pat. No. 4,969,038, which is a continuation of Ser. No. 906,969, Sep. 15, 1986, Pat. No. 4,984,073, which is a continuation of Ser. No. 723,183, Apr. 15, 1985, Pat. No. 4,660,086, which is a continuation of Ser. No. 394,946, Jul. 2, 1982, Pat. No. 4,511,918, which is a division of Ser. No. 13,608, Feb. 16, 1979, Pat. No. 4,338,626, which is a division of Ser. No. 778,351, Mar. 16, 1977, Pat. No. 4,148,061, which is a continuation of Ser. No. 254,710, May 18, 1972, Pat. No. 4,118,730, which is a continuation-in-part of Ser. No. 267,377, Mar. 11, 1963, abandoned, which is a continuation-in-part of Ser. No. 626,211, Dec. 4, 1956, Pat. No. 3,081,379, and a continuation-in-part of Ser. No. 477,467, Dec. 24, 1954, abandoned.

[51] **Int. Cl.** ..... H04N 7/18  
 [52] **U.S. Cl.** ..... 358/101; 358/107; 382/34; 356/380; 356/3.6; 360/9.1; 360/72.1  
 [58] **Field of Search** ..... 358/93, 105, 106, 133, 358/101, 125, 108, 105, 120, 107; 382/34; 356/380, 386, 387; 360/9.1, 72.1

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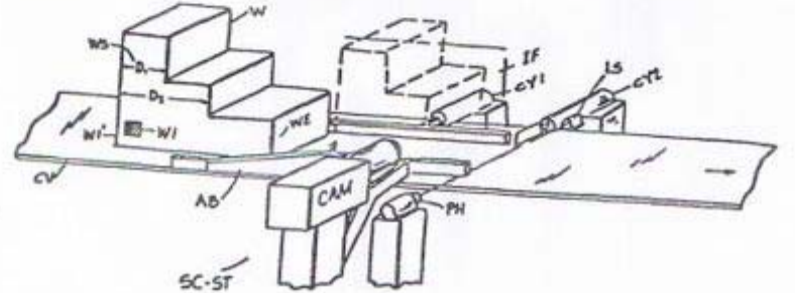
*Primary Examiner—John K. Peng  
 Attorney, Agent, or Firm—Steven G. Lisa*

[57] **ABSTRACT**

An automatic scanning and control apparatus determines the location of a predetermined segment of an image field being scanned. The predetermined segment presents an image which is optically differentiatable from the surrounding area of the image field. The apparatus includes a beam device for selectively scanning the image field and producing an output signal thereof. The beam device includes means for modulating the output signal in accordance with variations in the image field. The predetermined segment of the image field causes modulation of the output signal of the beam device by providing an inflection therein when the beam scans across the segment. An analyzing circuit is adapted to accept the output signal from the beam device. Means generate a locating signal in predetermined time relation to the scanning. Comparator means compare the inflection in the output signal with the locating signal so that the location of the predetermined segment of the image field can be determined.

A method compares an image field to be inspected with a standard image field. A standard image field is scanned with a beam and a video signal is modulated in accordance with intensity variations in the standard field. The video signal is recorded on a recording member. The field to be inspected is then scanned by the beam and a second video signal is generated. Both the video signals are reproduced and passed to a comparator means. A point to point comparison is made between the inflections and variations in each signal resulting from the scanning image areas of contrasting intensity by generating pulse signals during the intervals that the areas do not coincide. The pulse signals are then automatically analyzed.

109 Claims, 13 Drawing Sheets

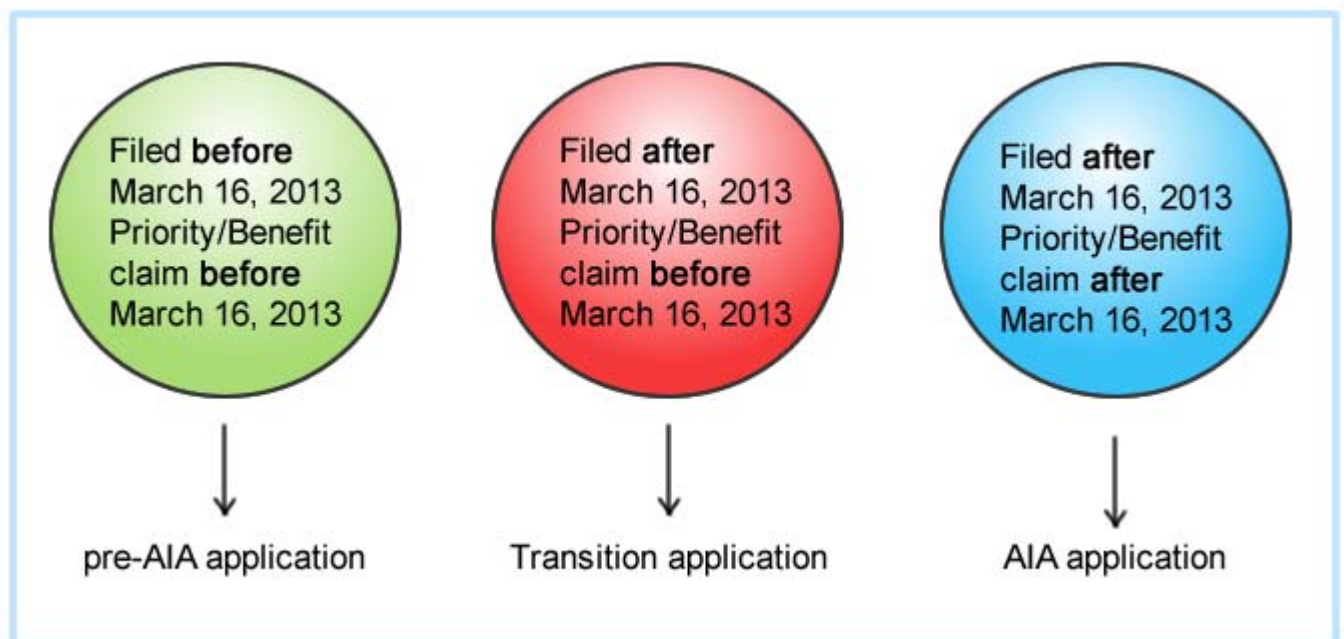


## **ANNEX 2: Change from “First to Invent” to “First to File”.**

(Source: USPTO official website: [http://www.uspto.gov/aia\\_implementation/index.jsp](http://www.uspto.gov/aia_implementation/index.jsp) (last visited July 17th, 2013))

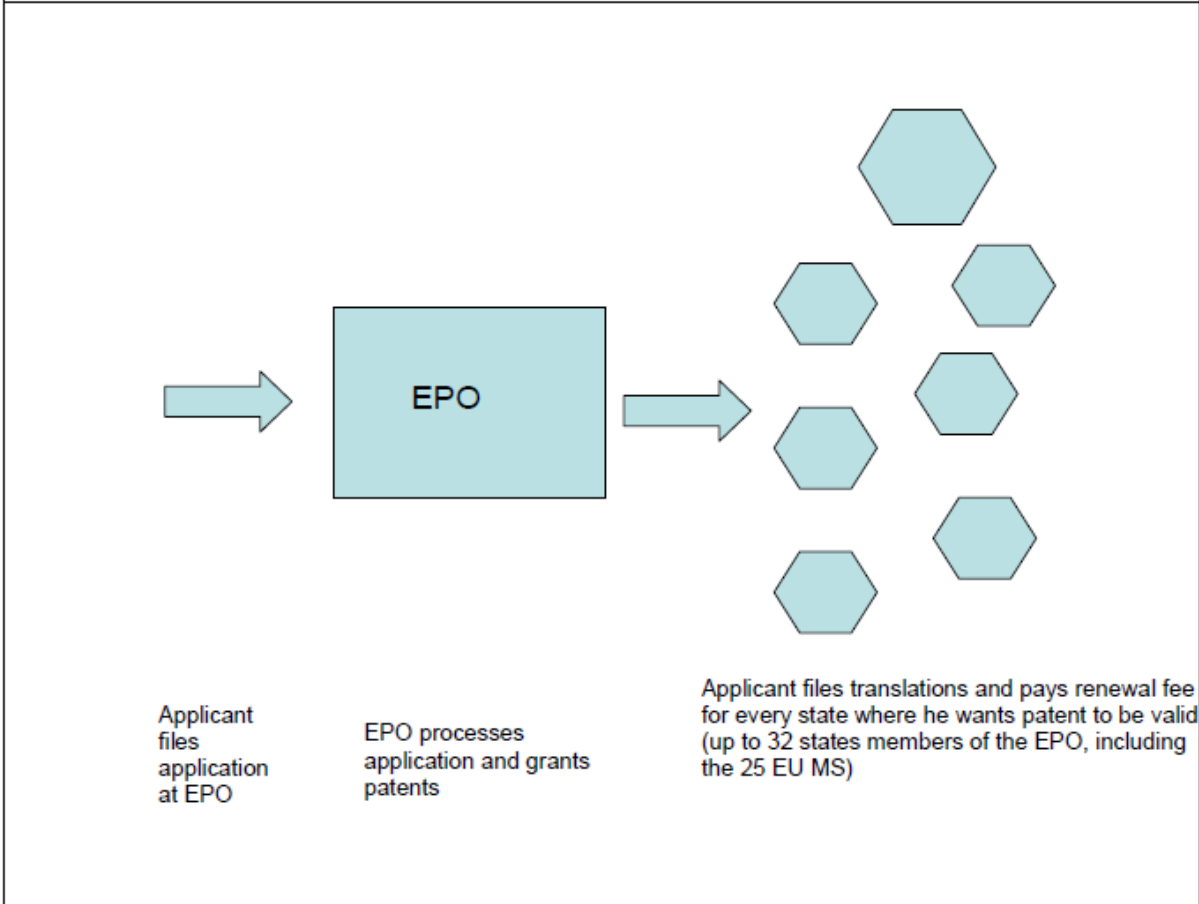
“Since the March 16, 2013 effective date of the first-inventor-to-file provision, the USPTO and patent applicants are prosecuting patent applications under two legal frameworks for prior art—first-to-invent provisions and first-inventor-to-file provisions. There are three possible scenarios that may arise in terms of which framework to apply to an application. These three scenarios are depicted in the graphic below.

- First, as shown in the far left green circle, if an application was filed before March 16, 2013 and all domestic benefit or foreign priority claims made in the application are to applications filed before March 16, 2013, then the application is subject to examination under the pre-AIA law (first-to-invent).
- Second, as shown in the far right blue circle, if an application is filed after March 16, 2013 and all domestic benefit or foreign priority claims made in the application are to applications filed on or after March 16, 2013, then the application is subject to examination under the AIA law (first-inventor-to-file).
- Third, as shown in the middle red circle, if an application is filed after March 16, 2013 but all domestic benefit or foreign priority claims made in the application are to applications filed before March 16, 2013, then the applicant must file a statement under 37 CFR 1.55 or 1.78 (1.55/1.78 Statement) with the Office if the application contains claims to subject matter not supported by the domestic benefit or foreign priority filing and therefore should be examined under the AIA law (first-inventor-to-file). The USPTO has designated an application that falls into this third scenario as a "transition" application, and they are the focus here.”



**ANNEX 3: Functioning of the European patent application before the “unitary patent package”.**

(source: [http://eupat.ffii.org/papers/smepanel0607/smepanel0601\\_EPO.pdf](http://eupat.ffii.org/papers/smepanel0607/smepanel0601_EPO.pdf), (last visited July 23rd, 2013))





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